Gleanings in Bee Culture

"Created to help beekeepers succeed."

September, 1950 Vol. 78, No. 9

Different types of honey containers make a display more attractive

Tips on Marketing Honey

By Edwin J. Anderson, State College, Pennsylvania

When the present depression in demand for honey began in 1948, it again became evident that we would have to put forth considerable effort in our marketing program, otherwise a sizable surplus of honey would accumulate and lower prices to ruinous levels. This threat was much more serious for dark honey than for light colored honey. Dark honey has always proved to be less attractive to the American public than light honey. Because of this partiality to lack of color there is now a discouragingly small demand for dark honey.

The first step taken in the advertising program here at the College was to buy a more attractively styled jar than the one-pound plain or utility jar of the war days. The utility jar requires a minimum of glass in its manufacture, it is plain and requires only a small space when packed, but it is equally small and unattractive in appearance.

The jar chosen as one of the most attractive from those examined and

An exhibit of the one and three ounce sizes for banquet use

now carried in stock by dealers and the one considered most convenient for table use was the large ovaline jar. This jar is wide and flat in construction. It is thin enough to make the honey look lighter in color but has enough depth to be stable and not easily tipped over. It has a large opening or cap which will permit the use of a tablespoon to dip out the honey if this is desired. When this jar was placed in the stores there was an immediate favorable reaction to its appearance. To the attractive appearance of this jar can be added one favorable feature in design which makes it convenient to handle, and that is the slightly depressed walls that are corrugated, making the jar easy to pick up and not likely to slip from one's hand. There is little doubt that this jar or other types of jars with modern design help to increase sales.

Individual Service Jars

The second item given attention in the advertising program was the occasional call for honey to be served at a banquet or to be supplied as a favor to those attending the banquet. It seemed advisable to make a special effort to satisfy this demand since this service has considerable indirect advertising value. With this in mind a trip was made to the show room of a large glass manufacturer to see what type of container could be found to meet this special need. Two sizes of small jars showed promise, the first a one-ounce container and the second a three-ounce size. A small supply of both sizes was purchased.

The one-ounce jar seemed to meet the requirements of those who wished to have the honey served and eaten at the table, while the three-ounce size made a more attractive favor to take home. Two styles of the one-ounce jar were available, one that looked like a miniature milk bottle with the cardboard top, and the other a small square or rather cube-shaped jar with the screw cap. The latter was chosen as the more satisfactory of the two. This had also been seen at the Ohio Honey Association where it was being received with favor. A small, neat, gold and black label was purchased which read HONEY and Penna. State College and indicated the weight of the contents.

Liquid, Chunk, and Crystallized Honey

Three types of honey were placed in the three-ounce jars — liquid, chunk and finely crystallized (the latter to be sold only by those who have the patent rights). The one that appeared most attractive was the jar containing chunk honey. One small piece of light comb honey cut 1¼ by 1¾ inches in size was placed in each jar and the small spaces about the comb were filled with hot

The college exhibit showing sizes of containers and two porcelain containers or pitchers attractively designed.

liquid honey of light color. A label with only the word "HONEY" was placed on the face of this and the other three-ounce jars. The small label reading HONEY and Penna. State College was placed on the white cap.*

The first labels placed on the white caps had a tendency to turn up at the corners and drop off. This difficulty was largely overcome by rubbing the cap with a cloth covered with scouring powder. The grit in the powder quickly removed the glaze on the cap and permitted the label to stick fast.

The cost for both the jar and honey is about four cents for the one-ounce container and six cents for the three-ounce size (without labor costs). The bottles can be sold for these prices but there will not be much profit. The greatest return will be from the advertising value of the containers. The tiny jars have brought many favorable comments and find a market in unexpected places. They can be given away to advantage when the occasion arises as a means of direct advertising.

Marketing Bulk Comb Honey

The third effort directed towards expanding markets was to try some new ways of preparing chunk honey for market. This was done in order to duplicate, at least in part, this successful method of marketing honey now so common in the South but not entirely successful in the North because of the crystallization problem.

The first step taken was to try to find a method of prolonging the length of time the honey can be kept liquid since chunk honey is useless after it has crystallized.

Bottles of chunk honey were placed in the constant temperature ovens and held at temperatures ranging from 100 to 115 degrees F. It was found that this heating retarded crystallization but spoiled to some extent the appearance of the comb in the jars. The comb lost much of its whitish appearance and looked like comb honey with watery cappings. The comb had a tendency to become soft and rise to the top of the container leaving only clear honey on the bottom half inch or more of the jar. This shifting of the comb gave the contents an undesirable appearance. Very little damage was done at temperatures below 108 degrees F. but when oven temperatures were raised above 108 degrees, the damage to the appearance of the comb became more pronounced. Some of the shifting of the comb was avoided by turning the jars upside down or on their sides until the honey had been heated and cooled to room temperature.

A more satisfactory method of keeping the chunk honey liquid for a reasonable length of time was to heat the liquid honey to 142 degrees

*As we understand the Federal Law, the net weight must appear on each label. —Ed.

and pour it at this temperature around the comb honey. The comb honey was room temperature or about 75 degrees F. when the hot honey was added. Honey at 150 degrees caused the comb to become soft and rise from the bottom of the jar the same as did the honey heated above 108 degrees in the constant temperature chamber. It was also found that if hot honey is to be added to comb honey on a very warm day when the temperature is above 75 degrees, the temperature of the liquid honey would have to be reduced the same number of degrees below 142 that the comb honey was above 75 or the comb would become soft and rise in the jar. It seemed best to bottle chunk honey only when the comb was held at 78 degrees or less.

Samples of chunk honey bottled in this way and kept in a refrigerator at 58 degrees (which is the ideal temperature for honey to crystallize) remained liquid for 10 weeks, then began to crystallize slowly. The honey stored at room temperature (75 degrees) remained liquid for one month longer or nearly 14 weeks. The honey used was clover honey. Other types might give quite different figures.

This study shows that chunk honey should be made up in small quantities and sold to the consumer within about six weeks of the date of packing. Chunk honey marketing does not look like a large commercial proposition but a job for the beekeeper who sells regularly to the stores or direct to the customer.

A special type of globe-shaped jar was found to be most attractive as a one-pound chunk honey container. Three pieces of comb were squeezed into this container in the manner of a three-pointed star and the jar filled with hot honey. This jar holds one pound of honey. The appearance of the globe-shaped jar is quite attractive when a good job is done in cutting the comb and placing the three pieces in the jar. The label with the word HONEY is placed on the face of the jar since a globe-shaped jar will not take a normal size or shape of label. The regular label is placed on the lid . This type and arrangement of labels shows the chunk honey to the greatest advantage since very little of the contents are hidden behind a label.

The demand for chunk honey turned out to be spotty. This honey sold moderately well in some stores and slowly in others. It is very easy to ruin the market for chunk honey by carelessly handling this product. The greatest damage to sales can be done by leaving the honey in the store until it begins to crystallize.

Large Honey Displays

The fourth and last step in advertising that was tried was advertising by means of large displays of honey placed in chain and independent stores. We were told by the manager of one of the stores that large displays of any product increase sales by about 1000 percent.

Each of the exhibits consisted of a sizable display of jars of all sizes and types of containers plus comb honey and designed beeswax. Honey recipes from the American Honey Institute were included in each display. A glass hive of bees with the sign "Can You Find the Queen?" was placed in the center of the display. Two other signs telling about the ingredients and virtues of honey completed the exhibit.

There is no limit, we found, to the variety and styles of exhibits and to what may be included. The displays proved more effective when varied each year. A strong light behind a large pyramid of one-pound jars did a great deal to attract attention. Motion of any kind also helped to catch and hold attention.

The sales increased 800 percent during the weeks the honey was on display. The sales then gradually returned to normal or nearly normal during the next few weeks. The possibilities for increased sales of honey over the country would be great if each beekeeper were to place such displays in every grocery store twice a year. The increase in sales would be even greater were the beekeeper to put on a white apron or white coat and stay with the exhibit during the busy hours of each day. His job would be to tell the customers about bees and honey while passing out samples of honey on crackers.

The crop of light honey at the College sold much faster than was expected when the above program was followed. Other steps in marketing are being tried and will be reported upon when definite results are obtained.

Honey, Bees, and Honeycomb—Historical Note

By Stanley Macht, M.D., Baltimore, Maryland

The earliest reference to honey occurs in Genesis 43:11 in which honey is listed as one of the choice products of Palestine. Scattered throughout the remainder of the Bible there are 21 references to Palestine as a "Land flowing with milk and honey". (See summary.)

The Mishnah, a commentary on the Bible (a collection of laws) compiled by Judah the Prince and his colleagues, specifically designates bee honey and hornet honey as pure food (Mach. 6:4) and considers honey as a fit gift for the Temple. II Chron. 31:5 lists honey as one of the offerings fit to be brought to the Temple for the priests. Lev. 2:11 forbids burning of honey for a sacrifice —probably because of its fermenting properties.

Actually, beekeeping was hardly known in Palestine before the Greeks. In the entire Old Testament bees are mentioned only four times and honeycomb is mentioned only eight times. Although honey is frequently mentioned in the Bible, the Mishnah, and the Torah, all Biblical references to bee honey must be interpreted as meaning the honey of wild bees found in the clefts of the rock (Ps. 81:16), (Deut. 32:13), in the wood (I Sam. 14:25), and even in the carcasses of dead animals (Judges 14:8 and 9)—"There was a swarm of bees and honey in the carcase of a lion". In Judges 14:18 "honey" was the answer to Sampsons' riddle.

Honey was one of the products exported to Tyre (Ezek. 27:17); it was among the provisions brought to David and his people in exile (II Sam. 17:29) and it was one of the two main articles of food in the diet of John the Baptist (Mark 1:6). According to the Talmud, honey is one of the seven healing substances (Ber. 44b); its sweetness is $\frac{1}{16}$ that of manna (Ber. 57b)—manna itself is called either bread or honey (Yoma 75b) and tasted like "wafers made with honey" (Exodus 16:31).

Ancient authors (Ovid, Metamorphosis 1:112-13) speak of rivers of milk and honey as a symbol of abundance.

When Rab-Shekeh, the Ambassador of Sennacherib, attempted to persuade the people of Jerusalem to surrender (II Kings 18:32), he promised them a land of honey.

Honey is a symbol of the benefits bestowed by God (Ezek. 16:13, 19). Godless men will be denied the sight of the flowing streams of honey (Job 20:17). The sweetness of wisdom is compared to that of honey (Prov. 24-13 and 14) but too much of a good thing may be disastrous, as overeating honey is (Prov. 25:16 and 25:27). Josephus called the sap of the palms of Jericho honey—as such it was probably the palm oil mentioned by Heradotus (1:93).

Honey was also considered to be a tempting food as indicated in I Samuel 14:26, 29, 43 when Jonathan ate honey in spite of the fact that all foods were forbidden him. In I Kings 14:3 Jeroboam's wife carried honey as a gift to a prophet in order to obtain information about the future of her sick child.

The book of Psalms refers to the words and laws of God as having the sweetness of honey (Ps. 19:10; 119: 103) and Solomon's Song of Songs 4:11; 5:1 describes the Church's grace as being sweet as honey.

Dr. David I. Macht has noted: "That the etymology of the Hebrew word for bee comes from the root 'Davar' denoting 'talk' or 'speech' and this, of course, is a logical and semantologically appropriate description of the buzzing and persistent noise produced by the bees".

(Continued on page 581)

Dr. Stanley H. Macht of Baltimore, Maryland, is a specialist in the use of X-rays for diagnosis and therapy and in the use of radium in treating cancer. He is Chief of the Department of Radiology of the Baltimore City Hospitals and is Assistant Professor at the University of Maryland Medical School. He acquired an interest in bees as a hobby three years ago when he captured two swarms that issued from under his home. Since then he has become an ardent apiarist and student of bee culture. He is currently busy in making a collection of small quantities of honey from all sections of the country in order to study the various flavors. Dr. Macht is the author of numerous scientific articles in the field of medicine. His biography appears in the 8th. Ed. of American Men of Science.

Queen Introduction

By Howard J. Rock, Wolcott, New York

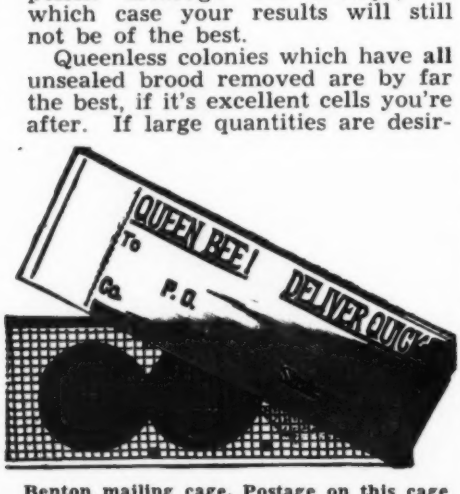
A pioneer beekeeper of California once said, "All there is to this beekeeping business is plenty of good combs and good young queens." A whole volume could be written on either subject but I shall confine my comments to the aspects of good young queens.

Many methods of introduction have been disparaged by those who attempted to force inferior queens upon the colony. Therefore, we must consider the rearing of the queen as the first step in introduction.

By far the very best requeening is natural supersedure in late summer before the old queen manifests signs of failing which are apparent to the beekeeper. If the stock is good and there is fresh pollen coming in you can secure no better queens.

After keeping bees all over the U.S.A. on an extensive scale I am convinced beyond all doubt that one cannot reasonably expect uniformly good results with mass-produced "sugar-syrup" queens. Feeding is vitally important in getting good cells from which vigorous virgins will emerge. If there is no honey flow on at the time, diluted honey must be given. Natural conditions are more nearly simulated thus and there is usually a fresh supply of pollen although not always, in which case your results will still not be of the best.

Queenless colonies which have **all** unsealed brood removed are by far the best, if it's excellent cells you're after. If large quantities are desired, a swarm box or confined starter colony containing about six pounds of bees from intensive brood rearing colonies is very desirable.



Benton mailing cage. Postage on this cage is two cents. A larger size for longer distances requires four cents.

It costs money to rear superior queens. One idiosyncrasy of northern beemen is the very unreasonable expectation of getting good queens and plenty of them without an expenditure of time and money and equipment. A visit through a modern queen yard in the South would be an eye-opener for most of them—or would it?

To return to cell getting, whether one grafts or uses an Alley type method,* it is imperative to have just hatched larvae of a uniform age. In this way you can wait until the virgins are "kicking" in the cells. Whether given to "nucs" or regular colonies, acceptance is always higher. However, I find acceptance to be good only if the nucs are well fed and they are not subjected to the threat of being robbed out by regular colonies during a dearth of nectar.

In addition I have always found that multiple nucs and those perched on top of established hives give poor results and at best are an impediment in hive manipulation. For best results keep the nucs in a separate yard, in separate units placed on or near the ground. Result: few losses.

Specialists in queen rearing demand nucs designed to rapid manipulation, etc., but for the beeman who rears queens for his own use the three-frame standard is most practical as it maintains itself well, can be used for increase easily, and for purposes of introduction there is no safer way of introducing a queen than in transferring the entire nuc into the hive requiring a new queen. If the colony being requeened is populous and there is a dearth of nectar, the queen may have her wings chewed up and be superseded but this is easily prevented by a small feed or spraying of sugar syrup during the actual transferring.

*[This method consists of cutting strips of comb containing eggs or very young larvae, and destroying every other cell, then giving this comb to a queenless, broodless colony.—Ed.]

While requeening, especially during late summer, be sure there is only one queen present as this is the bees' favorite time of year for normal supersedure. If I find the young queen to be in apparently good shape I leave the colony alone as I realize that the queen is a much better one than can be reared by me. Nature is always just a little beyond our limited efforts.

Cage Introduction

Sometimes we desire to change our stock in which case we are confronted with cage introduction. In a season of long honey flows any method seems to work—even that of lifting the old queen off the comb and putting the young one in its place—in spite of principles of the ancient odor theory. Incidentally, I don't know of any business in which so many theories can be debunked as in beekeeping.

It seems that each season a new queen cage makes its appearance on the market with the implication that it is "foolproof" even in the hands of the novice. Then along comes a season of scant or sporadic honey flows, such as we have had in this region, and the new cage is found to be no more reliable than the plain old mailing and introducing cage whose limitations are well known.

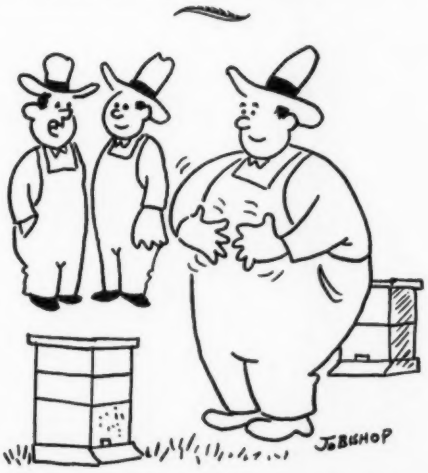
I have found much of good in the queen-colony balance principle as outlined by E. L. Sechrist. Dr. C. C. Miller understood this years ago when he established three-frame nucs and delayed giving the mailing cage to the nuc until he was sure that all the old bees had gone back to their old stand.

A method which has stood the test of time is one based on the Chantry principle and used with modifications by beemasters like the late Mell Pritchard and Jay Smith. I have never seen the Chantry* cage give poor results. It is thoroughly explained in all bee texts.

Many good operators use the cage-in-comb method. It gives good results as I know from using it extensively, but it is more tedious and time-consuming than a cage built along Chantry lines.

There are expert beemen who use special methods of introduction very successfully but these same methods are a failure with others because these experts can explain their procedure but cannot impart their judgment which can only be attained through much experience. As an example: Some beemen can requeen by merely placing the new queen in the old queen's place with regularly good acceptance. Others can requeen very late in the fall. Here in New York we are experimenting with placing queen cells in a remote corner of a second brood chamber of a hive containing a failing queen. Of course this queen cell contains a virgin which is moving around and ready to hatch in a short time. Probably we will confine the old queen to the bottom brood nest via excluder until the virgin has "hardened up" but time will tell whether the increase in acceptance will repay the extra labor involved. I don't believe it will.

In perusing the bee literature of 50 years ago one cannot help noticing the contrast in attitudes toward queen introduction as manifested by present beekeepers and those of that period. Probably the casualness of today toward this manipulation and the wholesale methods used explain the mediocre results obtained when conditions are not such that a rank amateur can also succeed.



"He saye he knows where we can store some honey!"

*[The Chantry cage is so constructed that a piece of queen-excluding zinc in one end covered with a little queen cage candy permits some of the bees in the colony to enter the introducing cage to mingle with the queen, but prevents the queen from getting out of the cage until later when candy in the opposite end of the cage is eaten out.—Ed.]

What of the Future?

By Bruce Morehouse, Montevideo, Minnesota

What will the next 25 or 50 years develop in beekeeping? What a conjectural q u e stion! Am I just plain crazy? Well, not necessarily, but it helps to be a little "touched".

At any rate my guess is as legitimate as yours, so I'll just light up my bellows smoker and day dream, while the smoke rolls around and draws back the curtain of prophesy. Besides, I'm celebrating 25 years of commercial beekeeping and wonder what the next 25 years have in store.

Speaking of smokers, there's something that seems to be in for a considerable change. We get pretty tired of working that bellows, especially on a windy day. Some smart guy will some time bring forth a device looking much like a flashlight, worked with a trigger, that will spout forth not smoke but a pacifying smell that was poured in from a bottle. The same fluid may work better in acid trays on cold days, too.

Wood, plastic, or metal. Bottoms and bodies will continue to be of wood unless some better and cheaper plastic is developed. Tops will be wood and metal, and some of plastic material. There will be departures from wood for frames, using both plastic and metal. Look for inner covers to be made of plastic, reversible for top winter entrances or for top nuc divisions. As for design of these units, do not look for much change but improvements in both tops and bottoms. A canned plastic will be available for repair jobs on boxes, applied with a putty knife. Oh, yes, there will be further attempts to use something other than beeswax for foundation and with more or less success.

Improved bees will arrive. Did you ever see the dwarf bees that emerge after a period of near starvation? If unfavorable conditions will produce dwarfs, then continued favorable conditions with decades of controlled breeding should produce an improved race of honey bees. It may be a long and painstaking way. After all, just what desirable changes do we want? Honey bees are now doing a glorious job of pollination, humbly carrying on without due credit, and provide mankind with the finest sweet obtainable to boot.

Pollination: One of the big changes the coming years will see is the public attitude toward bees and beekeepers.

Instead of farmers saying, "I don't want bees on my place", or demanding honey rent for each apiary, they will be glad to cooperate with grove planting for apiary shelter and no rent demanded, in cases paying a pollination rent to have the bees located on a farm or close by. Farmers will realize how dependent they are on honey bees for a "set" of so many crops and seeds that the beekeeper will be a welcome necessity. There will be increased demand for apiaries to do pollination work, on fruit and clovers especially.

Moreover, as the general public and governmental lawmakers come to realize how much we owe the little honey bee for its priceless service of pollination, they will cooperate with beekeepers and the American Beekeeping Federation to see that the commercial beekeeper receives a fair return on his investment and for services rendered. The unfair tax on honey bees and bee equipment will be eased and in many localities eliminated altogether. If government subsidies are then in vogue, some form of support will be granted beekeepers. This may be a support price on honey or for the count of colonies controlled, beyond ten in number. Of course, the Government may tell beekeepers, through county agents or other authority, where apiaries may be located in order to receive government benefits, but since beekeepers will receive their just compensation for the service of their bees, that is to be expected.

The extracting process is in for some changes. The public will show a real preference for aromatic and flavorful honey in preference to merely sweet honey, and this will bring about better practices in extracting and packaging. The deli-

cate bouquet of comb honey is largely due to the release of volatile oils and aroma when it is eaten. In the extracting process this aroma is partly dissipated. What to do to keep as much of this aroma and delicate flavor is something to work toward.

Less time from extracting combs to containers and with less sustained heating should improve the flavor, aroma, and color. Cappings melter honey will be kept separate as second-grade honey; extractor honey will be first-grade honey. Large settling tanks will disappear since honey warmers, strainers, and containers will do the job quicker and better. The uncapping process is now the bottleneck that slows up the remainder of the process. An efficient uncapping machine, reasonably priced, is needed, and there are indications that such a device is evolving.

Marketing: Do not expect us to ever get to the place where we can take a load of honey to town and sell it at a going market price as we do cream, eggs, turkeys, and beef. There will continue to be beekeepers who sell their honey too cheaply, and packers who will shop for an advantage in price. But there will be plainly marked grades on the honey labels, and known labels which will guide consumers no matter if there are divergent prices. Good quality honey will not need to meet the price of inferior quality honey. Federation, Institute, and Government will exert a stabilizing influence. In addition to the honey income will be the pollination benefits. Several new spreads, toppings, candies, and drinks made with honey will be sold.

Inspections. With the fall of Adam and Eve came pests, diseases, and all manner of scourges. Even insects such as honey bees are afflicted. To control bee diseases we have inspection measures. For cleanliness and grading of honey an additional inspection will be added. States will welcome permanent and migratory beekeepers but will regulate apiary encroachments. Let us not rule out the possibility of some new plague afflicting honey bees. If this should go unchecked it is doubtful if man could much longer exist. Following the disappearance of many fruits and seeds would come diseases, famine, and new plagues. "H" disintegration would be quicker and perhaps preferable.

Insecticides and Weedicides. Poisons, some now unborn, will be used to kill weeds, insects, and diseases in fields, orchards, and pastures. Their use will increase to a certain advantage of agriculture, and to a disadvantage of apiculture. Our Government, recognizing that we should not get along without these new pest controls and cannot get along without honey bees, will compensate beekeepers for proven losses.

Affiliations. There will be a strong national Federation and Institute that will work together for the good of all beekeepers and of American agriculture. There will be an upsurge of the sectional (several counties together) beekeeper associations, where beekeepers can gather for a social time, like on a Sunday afternoon, hear some outside speaker, maybe see a movie, and conduct group affairs. These sectional meetings will be the grass roots contact points for the two over-all organizations.

I'm glad to have had a small part in the past quarter-century of beekeeping. It has been an important period, the teen-age of American beekeeping. The period has seen the further growth of large-scale beekeeping, of the queen and package business, and honey house development. Ahead of us will blossom the full-grown maturity, the "of age" in American beekeeping. This period will be the golden years of full strength, vigor, and security. This does not mean a period of easy going and affluence, but it does mean that American beekeeping will be recognized for its legitimate place of worth and respect. There are spiritual rewards in beekeeping greater than money and position. The industry that would be among the first must be the servant of all.

The smoker has gone out, the curtain of prophesy is drawn, and a feeling of "more nerve than sense" comes over me. There are other important matters not revealed such as the future of comb honey, migratory beekeeping, and others.

If I am not around in 1975, I hope to gather with Langstroth, Demuth, and many others on a sunny slope where flowers bloom eternally and all things are made clear, watch the bees, and sing praises to the all-wise Creator of honey bees.

XUM

Four Years with Bees

By S. M. A.

Fig. 1.—Packed for the winter

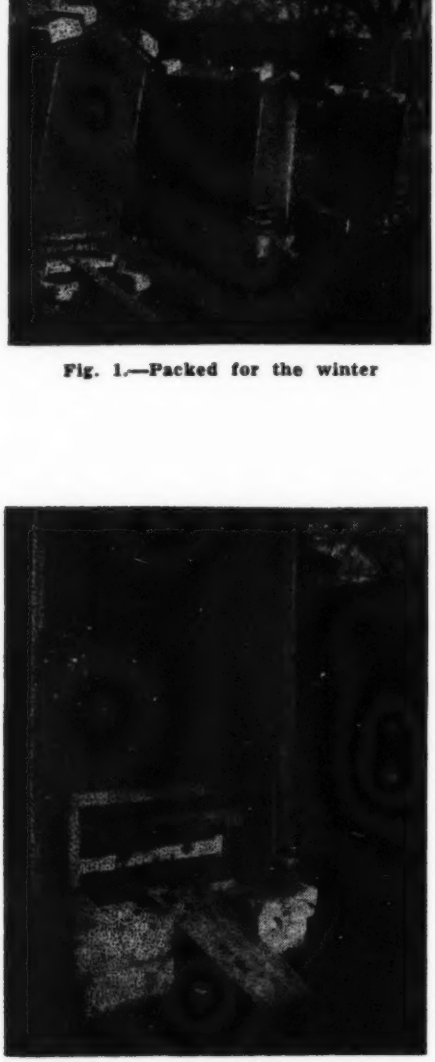


Fig. 2.—Just coming out for a flight after two weeks of cold weather. Snow was not present.

(Continued from June)

After reading a great many articles about wintering bees and talking with some beekeepers who have bees covered and uncovered during the winter months, as far as I can judge, those who protect them fare better than those who do not. Heavy losses of bees have been reported while others have had success. The man who does our spraying has seen whole outyards die out. I have followed the plan of those who pack and so far have had no losses. Although we have a great deal of damp weather and little snow the colonies lose very few bees and are active inside the hive. There have been no signs of Nosema and the hives are sweet smelling and clean.

The casings which I use are cheap and light in weight and easy to assemble. They are made of orange crates that have been wrecked and the solid ends sawed into two-inch strips. Two strips of these nailed together to make one strip 33 inches long are needed for the back and for the front, and three for each side. The sides of the crates are nailed crosswise of these strips and the front and back are built up to make a slant for a roof. The strips are even with the hive corners front and back and the sides extend two inches beyond, fitting against the extension of the cross boards front and back.

The casing hooks at the corners and the folding roof fits down well over all. Inside burlap is tacked to the strips and the intervening space is filled with straw. The top of the hive has neither outer nor inner cover but an excluder is placed over the top frames and raised at the front to admit air from the top ventilating hole. The board that raises the excluder is a contrivance that the bees taught me to make. I have small slits cut in the edges of my excluders for various reasons and one fall when the cold winds started before the bees were packed they set to work of their own initiative to make a windbreak around it and yet admit the air. This they did with propolis in so perfect a way that I thought it was worth copying

and I hope to have entrance cleats made the same way next winter. They built a circular wall on the inside of the opening, circling it out about a half-inch or more and leaving a small opening right near the edge for one bee to pass through. This acted as a buffer for any wind that entered. This I copied in wood and slipped it under the edge of the excluder having the opening correspond with the auger hole in the outer casing.

Above the excluder is a burlap bag of straw to take care of any moisture that does not escape and also a layer of rock wool, capped, of course, by the roof. The lower entrance is cut out to fit over the extension of the bottom board and a windbreak board is leaned up loosely against the whole. I had an experience with them this winter which proves that they can take care of emergencies almost as well as or better than we can sometimes. A severe wind came up one night after a warm day when I had removed the windbreak and it blew the entrance cleat in about an inch under the frames. When I reached there this space was being filled by several worker bees with the bodies of dead bees. As I began to remove them the bees showed evident signs of distress until I retrieved the cleat and adjusted it properly, then they looked at me and re-entered the hive and disappeared up the frames not to be seen again, which I took as a confirmation of their complete satisfaction. I then replaced the windbreak and left them to themselves. That buttress of bees to keep the wind out, so solidly and compactly constructed, was another study for me.

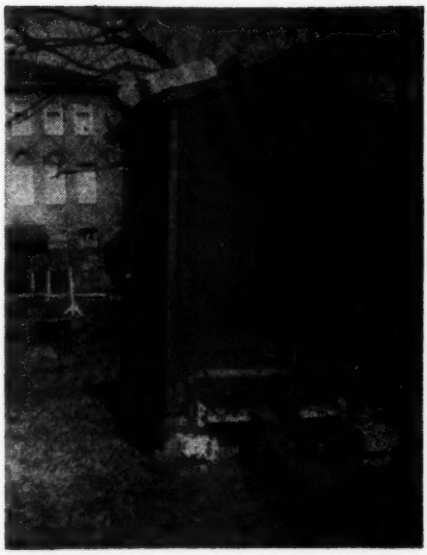
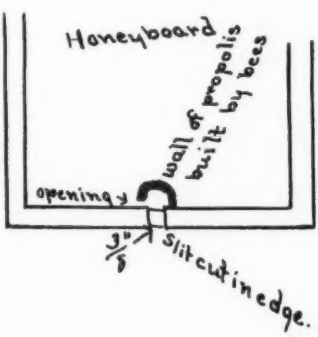
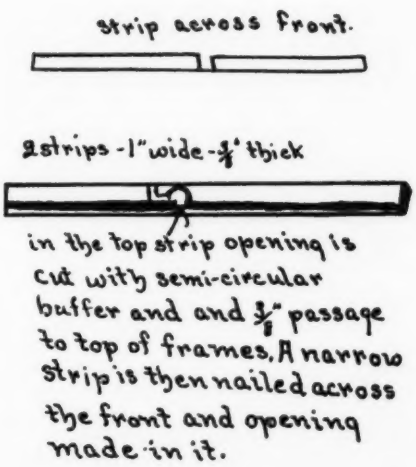


Fig. 3. — The bees out for a cleansing flight. The top opening is for a three-story colony and the lower auger hole for a two-story colony.

The outside of the hive casing is covered with asphalt roofing as the pictures show.




strip across front.
2 strips - 1" wide - 3/8" thick
in the top strip opening is cut with semi-circular buffer and and 3/8" passage to top of frames. A narrow strip is then nailed across the front and opening made in it.

Old Time Beekeeping

By C. H. Pease, New Canaan, Connecticut

When Bees Were Honey Flies and Workers Were Mules and Neuters

I have a book entitled "A Farmer's Manual", published in 1819 by Frederick Butler, A.M., the title page of which tells us that it is a "plain practical treatise on the art of husbandry, designed to promote an acquaintance with the modern improvements of Agriculture, together with remarks on Gardening, and a treatise on the management of Bees". With a view to learning something about "the management of bees" I perused this "Practical Treatise" from which I learned much that no present-day treatise has ever told me—among other things workers were known by four names: common bees, worker bees, mules, and later when the "learned apiarians" decided that workers were neither male nor female they were called "neuters". And pollen was called "farina".

Here are a few excerpts from this book which may convince modern beekeepers that something has been learned about bees in the past 131 years:

The modus operandi of uniting colonies in those good old days was quite unique and was called "the junction of two swarms". Here it is: "Search the hive of one of the swarms and remove the queen, and then immerse the two swarms, as to be united, in pure water, or water saturated with ale, sugar and honey, and placed in a tub for the purpose; when they are well mixed together by stirring, then strain out the bees by passing the liquor through a sieve, and return both swarms, so mixed, into one hive and place it near the fire. They will soon begin to hum, and in one hour will be restored to life again; no quarrel will ensue upon this method, but all other methods of joining swarms generally expose them to quarrels". However, I think I will stick to the good old newspaper method a little while longer.

Among the maladies of bees, "Abortive brood" (which was evidently what we now know as foulbrood) was described as "very injurious in its effects upon the bees", one cause of which was said to be "when the worm is placed in the cell with the tail turned towards its mouth, in which case the young bees, incapable of extrication, die and putrify".

Another serious malady of bees was dysentery and said to be "the most common as well as fatal.... The bees when afflicted with this disease destroy each other by contaminating their wings with this excrement and thus stop the organs of persperation". It was considered incurable, "although its prevention may be effected". One remedy was: "To a quart of white wine add a pint of honey and two pounds of loaf sugar, with an addition of cloves and nutmegs; also the bark of pomegranates pounded and mixed with honey". One Italian author recommended "fresh urine placed on plates near the hives". Various other concoctions were recommended, all of which we now know are absolutely useless.

Another disorder that modern beekeepers may not be familiar with was: "The attenna of the bee are sometimes diseased and turn yellow, attended with some swelling". And still another complaint that worried the old-timers was evidently what we now consider that expression of happiness among the workers known as "shimmying" or "dancing". They called it "vertigo", for which they claimed no remedy had been discovered—and even now, has anyone ever tried to find a remedy?

Ants were classed among the enemies of bees, and the remedy recommended was "a little garlic rubbed about the hive". Another enemy of the bee was the bee moth that "in its caterpillar state gnaws our trees, books, papers, etc., and the moths lay their eggs in and out of the hive and are introduced carelessly by the bees into the hive where they are hatched with the other eggs, the substance upon which the moths feed in the hive when grown". As a means of exterminating the bee moth we learn that "some persons surround their apiaries with torches in the evening in order to destroy the moth by singeing his wings".

This book tells us that "the queen is a virgin mother and her eggs are

impregnated by the drones after she has deposited them in the cells... The drone's whole utility in the hive consists of being an instrument of fecundating the eggs when deposited in the cells, or otherwise, as may be".

A bee hive, previous to 131 years ago, was described as "made of a section of a hollow tree, but the difficulty of obtaining this led to the expedient of weaving the straw hive". This was followed by a glass hive, which was expected to give the keeper opportunities to observe and study the activities of the bees, but it proved very unsatisfactory. All sorts of experimental whims were tried and abandoned until the "learned apiarians of Europe" concluded that "no form of hive can be constructed that will ensure great harvests of wax, honey, and swarms."

The author of the book described one of his improved hives from which he boasted that "in the month of August, 1810, I obtained from one of my hives 18 pounds of beautiful comb honey, and by the 10th of September I took out ten pounds more, leaving a sufficiency to supply the swarm through the winter". Just think of it! A total crop of 28 pounds from one colony of bees was surely something to brag about (in those days). According to this ancient beekeeper he estimated that over a period of ten years his colonies would average what he considered a profitable crop of 15 pounds a year. Owing to their pyramidal shape the old straw hives (called skeps) did not lend themselves to enlargement by the addition of supers, as we know them, although some beekeepers had begun to make two-story hives by placing a second skep on top of the first. The joints between the two were "plastered with mortar or clay at the junction by which they appeared to form but one distinct hive; holes were bored in the top of the lower story for the bees to pass from one story to the other." They called this the "storying system of beekeeping".

There were no mechanical extractors prior to 1867 (the year I was born) when L. L. Langstroth made his first one, and before modern extractors came the only means of getting liquid honey was by cutting the combs in pieces and squeezing the honey out through what they described as "sieves of horse-hair cloth". After the extracting, all utensils were exposed to the bees to be cleaned out, but the warning was given that "care should be taken not to expose to them pure honey as this will injure the bees".

Visitors from Scotland

Dr. J. N. Tennent and Mrs. Tennent of Glasgow, Scotland, on an extensive trip through United States, paid a visit to Gleanings on July 27. Dr. Tennent is Convener of the Library Committee of the Scottish Beekeepers' Association. Mrs. Tennent also works with the bees and takes the keenest interest in everything pertaining to beekeeping in America. Gleanings wishes this charming couple a happy journey.

Muffin Magic

By Mrs. Benj. Nielsen

Honey bran muffins add a crowning touch to the simplest meal. — Photo courtesy Kellogg Co.

Run out of bread? Guests drop in and there's not enough bread to go around? Well, that's no catastrophe! Just tie on an apron, reach for the honey jar, and stir up a batch of luscious honey-way muffins. You'll add a crowning touch to the meal, be prepared for seconds (and thirds), be asked for the recipe,—and there's another boost for honey. If you would be prepared against future unexpected invasions, you can measure and mix dry ingredients in spare moments, store in jars with tight-fitting lids, then add the liquid ingredients in a twinkling.

Of all the ways we use honey, I think that there is no way that we enjoy it more than in these delightfully-flavored, piping hot muffin variations. A meal of left-overs, plus a batch of delectable golden-brown honey muffins, adds up to a most satisfying repast.

If there's a dab of marmalade, a bit of jam or jelly in the jar, try this: place a spoonful or two of muffin batter in each greased cup, add a dash of marmalade, jam, or jelly, then the remaining batter, and pop into the oven. Yum!

Just one precaution is necessary to turn out super muffins each and every time. After adding the dry ingredients stir only until flour disappears. The mixture will be lumpy but the finished product will be superb. Remember over-mixing makes those tunnel-like holes. So don't over-stroke. Good eating to you!

Honey Bran Muffins

Three tablespoons shortening, ½ cup honey, 1 egg, ⅓ cup buttermilk, 1 cup bran, 1 cup sifted flour, 1 teaspoon baking powder, ½ teaspoon salt, and ¼ teaspoon soda.

Blend shortening and honey. Add egg and beat well. Add milk and bran; let soak until most of moisture is taken up. Sift dry ingredients together; add to first mixture, stirring only until flour disappears. Fill greased muffin pans two-thirds full and bake in moderately hot oven (400 degrees F.) about 25 minutes. Yield: 8 large muffins (3 inches in diameter) or 16 medium muffins (2¼ inches in diameter).

Honey Date Muffins

One egg, well beaten, 1 cup chopped dates, 4 tablespoons melted butter, 1 teaspoon salt, ¾ cup milk, 2 tablespoons honey, 2¼ cups flour, and 2¼ teaspoons baking powder.

Sift flour, measure, and add baking powder and salt, and sift again. Combine egg, milk, honey, and butter. Add 4 tablespoons of flour mixture to dates and mix well. Add egg mixture to flour and combine only enough to dampen the flour. Add floured dates. Turn into greased muffin tins and bake 25 minutes in a hot oven, 425 degrees F.

Honey Corn Flake Muffins

Two cups corn flakes, 2¼ cups sifted flour, 4 teaspoons baking powder, ½ teaspoon salt, 1 egg, well beaten, 1 cup milk, ¼ cup honey, and 3 tablespoons melted shortening.

Crush corn flakes into fine crumbs. Mix with sifted dry ingredients. Add egg, milk, honey, and shortening. Stir only until combined. Fill greased muffin pans two-thirds full. Bake in moderately hot oven, 425 degrees F., about 20 minutes. Yield: 12 muffins (2¼ inches in diameter).

Honey Bee Pollination — One of Agriculture's Most Lively Subjects

By Glenn O. Jones, Atlantic, Iowa

It would be gratifying to be able to give proper credit to all those who have helped to bring the pollination service of the honey bee to general public attention. Their number is legion.

Dr. W. E. Dunham of Ohio State University rates special mention because he was the first chairman of the Honey and Pollen Plants Committee of the American Beekeeping Federation. He was instrumental in arranging the first open meeting of the Committee to which were invited scientists from several fields of agriculture to discuss the role of the honey bee in our national economy.

Frank C. Pellett also rates special mention because his lifetime of work with plants that yield nectar and pollen provided a background of commanding interest and information, and his trial plots of literally hundreds of interesting plants from all parts of the world gave a fitting backdrop for the 1945 and 1946 pollination conferences at Pellett Gardens, Atlantic, Iowa.

R. B. Willson of New York City made significant contributions to progress during the time he served as Chairman of the Committee. When he was asked to assume the chairmanship of the Honey Utilization Committee he was succeeded by the present Chairman, Dr. S. W. Edgecombe of Utah's State Agricultural College at Logan. Co-chairman of the Committee is Clarence L. Benson of Phoenix, Arizona.

Pollination has become one of the most lively subjects in all of agriculture. It is now recognized as essential to an increased production of

(Continued on page 579)

While attending the forage seed conference at Atlantic, Iowa, this group called at the "bughouse", summer home of Mr. and Mrs. Frank C. Pellett, at Pellett Gardens. Back row, left to right. Frank C. Pellett; three beekeeping specialists from Iowa State College, R. H. Walstrom, B. A. Haws and Martin Polhemus; W. E. Dunham, Entomologist at Ohio State University. Front row, left to right: Miss Beverley E. Brink of the Federation office, Mrs. Frank C. Pellett, and Mrs. Melvin A. Pellett of Pellett Gardens.

XUM

Second Glances

By C. M. Isaacson

Requeening can include several methods (page 465). In our northern localities there is a great deal of automatic annual requeening through the medium of supersedure. Often fully 75 to 80 percent of colonies show up with young queens in the spring—raised late the preceding summer (we clip in the spring examination so we can distinguish new queens). And to the five methods mentioned by Mr. Purser might be added a mention of the ease by which a queen may be introduced to a colony with only sealed cells. Destroy the cells, drop her on a comb, and watch for the characteristic circle. When you see it, replace the frame carefully and close the hive. If there is any animosity, of course cage her again (this is for queens from the mailing cage as well as laying ones.)

"Jack-of-all-tools" might well be the name that Harvey Roberts has for his hive tool. He is right—also in saying that it is time someone led a cheer for that potent weapon against difficulties. The list of uses he gives is impressive, but more could and doubtless will be added. The mention of paint scraping brings to mind that I have used it for an entire wall of my house before repainting. It beats a wire brush (page 467).

Cutting queen cells as swarm prevention will work up to a certain point (page 468). After that out comes the swarm, even with no cells built, as Clarence Tontz found out. In outapiary practice that swarm would have been lost. I don't know California conditions, Mr. Tontz, but have you tried getting a new queen raised in each colony **before** swarming desire appears? Such colonies stand almost any amount of crowding without trying to leave you. And yes, it is a good idea to super sparingly as the flow progresses. That we need colonies with more bees is surely true, too. But that South African record, though very creditable anyway, was not produced from one colony but from several on one stand.

Many sales can be lost by one can of poor honey (page 471). My father and I used to sell considerable honey from door to door in the country around us and very often encountered that "honey on hand" phrase. We would sometimes even make a gift of a small amount of good honey just to start the family wanting it again. It often worked.

The Hodgson steam oven for capping melting certainly is a large capacity outfit. I like the idea of long draining of cappings instead of immediate melting—all the honey secured is then free of possible heat damage. It would be interesting to know how the wax left in the final refuse from the melter compares with that left by a good press. If the difference is not too great, the oven is well worthwhile from the standpoint of labor saved alone (page 472).

Blending of honey by the bees is often quite a thorough process, especially if the flows are light and intermittent (page 474). Bees usually will work one plant at a time if that plant yields nectar steadily. Otherwise they will naturally search for other sources.

Difference in spacing and arrangement is of real value in a bee yard. Long ago some of the pioneers pointed out that those beautiful straight rows were not so beautiful for the bees. Mr. Keller's diagram shows a good combination of systematic spacing with enough difference to help the bees. Personally, I like and use the pair grouping also, and in this brush country I like a yard placed among small trees and shrubbery. My friends tell me I need to use an axe, but these yards usually take in the honey (page 476).

Norwegian beekeeping would seem to be perhaps held to lower colony yields more by lack of large areas of suitable nectar-producing plants than by the season—especially in the southeastern parts where the May to September season mentioned is as long as our usual one here in Minnesota. It is interesting to read that outdoor wintering is generally practiced even where the winters are longer. The use of considerable insulation is in contrast to the teachings of some authorities here, but in severe cold it is an essential practice (page 478).

American Honey Institute News Notes

By Harriett M. Grace, Director
Commercial State Bank Building
Madison 3, Wisconsin

Of all the displays shown at the American Home Economics Association Convention held in Boston in July, that of Pepperidge Farm Bread was one of my favorites.

It wasn't because Pepperidge Farm Bread is made by hand and tastes just as good as grandma's used to that it was one of my favorites. It wasn't because there is an interesting history behind the bread that I liked the exhibit best. It wasn't even because Mrs. Margaret Rudkin,* President of Pepperidge Farms, was such a charming person to meet and to talk with. It was something else!

You've guessed it! Pepperidge Farm Bread's exhibit was one of my favorites because Pepperidge Farm Bread is made with honey! Fresh milk, pure creamery butter, flour, and **honey**—very dark honey, too—make the bread as delicious and famous as it is.

It was 13 years ago that Mrs. Rudkin invaded the kitchen of her 125-acre Westport, Connecticut estate to make a loaf of bread. Her son Mark was seriously ill with asthma; he needed nutritious, energy-packed bread to build up resistance. Armed with a detailed recipe, Mrs. Rudkin decided to make the bread herself.

No polished cook, Mrs. Rudkin's first attempts resulted in soggy failure. But she kept on trying until a well-browned, luscious loaf came from the oven.

That was only the beginning. Young Mark thrived on the bread. The rest of the family—her husband and two other sons, Henry and Bill—ate more bread than ever before because it was so good. Friends and neighbors tried it — and demanded more. Mark's doctor asked for loaves for his other patients. The grocers at Westport wanted it for eager customers. Mrs. Rudkin was in business!

At first Mrs. Rudkin baked the bread herself—eight loaves a day. She carried it to market in a wicker basket. Then she hired a girl to help. Then a boy to deliver the bread.

From that modest beginning, Pepperidge Farm, Inc., has grown. The bakery moved from the Rudkin kitchen to a made-over stable and finally to a remodeled hospital on the estate. Mrs. Rudkin now hires 200 men and women to turn out 50,000 loaves — 12 and 16 ounce loaves of white and whole wheat bread—each day.

Even at 25 cents and 31 cents a loaf and the bread sells itself. Mrs. Rudkin does little advertising; satisfied customers told others about the product and the market grew. Today Pepperidge Farm Bread can be found in 44 states and in many European countries!

From her son's attacks of asthma, a lot of determination, and milk, butter, flour, and honey, Mrs. Margaret Rudkin has made a three-million-dollar-a-year business.

*In May 1943 Gleanings carried a story, with several pictures, of Mrs. Margaret Rudkins and her successful bread-making business.—Ed.

Glass Jars for Retailing Chunk Honey

By J. E. Johnson, Verona, Missouri

In southwest Missouri the honey crop prospects for 1950 were never better. We have been having only light rains for a number of years but in early January we had seven inches and one could poke a stick down into the ground an unbelievable distance. White clover looks very good, so do the Vitex and other honey producing trees.

I use seven shallow frames in 8-frame supers. My customers prefer honey with comb in it, so I cut pieces of comb from the shallow frames, put them into coffee jars, and pour honey over to fill the jar. It is not difficult to pick up a hundred empty coffee jars, for everyone has them and folks who come to buy honey bring the empty jars.

During our years of light rain I get much more honey in shallow frames. I use wide strips of thin foundation or full sheets.

XUM

From the Field of Experience

A Sure Queen Introducing Method

By T. H. Harvey, Clear Fork, W. Va.

Instead of "impregnating" the cage with the odor of the old queen as Henri Michaud explains in the February 1949 issue of Gleanings, why not cage the old dead queen with the live queen? It seems to me that would have been a better method.

I have a method of requeening which I have found to be a sure and perfect way under all conditions and at all seasonable times of the year. Here it is: Remove the old queen, place the new queen in the cage, the ordinary introducing cage with a small amount of bee candy. Lay the cage on top of the brood frames or suspend it between frames and do not disturb it for three days. On the afternoon of the third day examine the queen to see that she is alive and in good condition. Leave the cage in the same position and close the hive. The cage is closed at each end by two wooden plugs from which small wires (frame wire is ideal) have been securely attached, the ends extending to the outside of the hive. Late that afternoon or before retiring at night go to the hive or hives and pull the ends of the wires which will pull out one wooden plug from the introducing cage and liberate the queen. The job is perfectly done and the beekeeper has full knowledge of exactly what has taken place and knows the exact minute the queen has been liberated. Simple, don't you think so? I have never seen this method discussed and neither do I know of any other beekeeper using it. Want to try it? I bet you.

This method has proved ideal for me and I would like to know if other beekeepers have ever tried it. I will liberate two queens in about three hours from the writing which is now 5:00 p.m., July 27.

[James Bain of Marion, Ohio, has a somewhat similar method. He pushes the caged queen into the hive entrance. A piece of wood is tacked over the candy in the end of the cage. After three days he reaches in with a curved wire and gently pulls the caged queen out. If the bees are trying to sting the queen through the wire screen he pushes the cage back and leaves it for another day. If the bees are friendly to the queen he removes the wood from the candied end and lets the bees liberate the queen.—Ed.]

100% Poisoning from Cotton Dusting

By R. E. Patrick

President of Lower Rio Grande Valley Beekeepers' Association, Harlingen, Texas

The bee industry has taken such a beating in the Lower Rio Grande Valley of Texas that most permanently located beekeepers are folding up. The cotton poisoning losses have been almost 100 percent. This is especially true in the citrus belt where the best honey is produced. Personally, my loss has been about $5000.00 including bees, comb, and equipment. With the uncertainty of the future you can easily understand why myself as well as many other beekeepers are quitting. Our losses have always been heavy every year but nothing to compare with this year. It seems unfair that the producer of one crop can protect himself with utter disregard for his neighbor and his property.

Calcium arsenate has been used in the cotton fields, dusting by airplanes, and it has drifted throughout the community, killing chickens, dairy cows, and rendering many pastures unfit for use resulting in total loss to the owners. In this area comprising about four counties I do not believe there are 50 colonies of bees left. This community as a whole does not yet know the seriousness of the loss, not to the beekeepers alone, but to all farmers who may not know it, but are dependent upon bees for pollination of fruit and vegetables which are so widely produced here. It is safe to say that the loss to the beekeepers alone will approximate $1,000,000 or more.

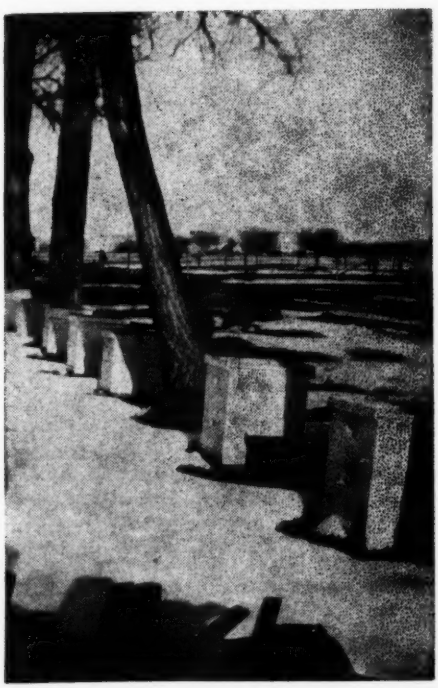
XIV International Beekeeping Congress at Leamington Spa, Warwickshire, England, September 3 to 8, 1951

The XIV International Beekeeping Congress will take place in Britain from Monday 3rd to Saturday 8th September, 1951, inclusive. Leamington Spa in Warwickshire has been selected as the venue for the Congress and all interested are asked to note that date.

The Organizing Committee for the XIV International Beekeeping Congress invites research workers and others with knowledge of special aspects of beekeeping to submit papers to be read at Congress. Papers are invited on both scientific and practical beekeeping and the Committee will endeavor to maintain a careful balance between science and practice.

Those wishing to read a paper should submit an abstract (not more than 200 words) in any one of the official languages of the Congress (English, French, and German). Abstracts will be considered by the Papers Committee and authors whose papers are selected will be asked to write a summary of not more than 400 words for distribution at the Congress. The Committee reserves the right to choose from the papers submitted those which will be given at the Congress. Papers may be read in any of the three official languages. The time allowed for the reading of each paper will be not more than 20 minutes and the total time for reading the paper and discussion will be 30 minutes. Abstracts should be sent to the Hon. Organizing Secretary, Miss N. Ironside, The Vicarage, Wragby, Lincs., Great Britain, by 31st December, 1950.

Ten Inches of Snow in May



J. E. Darham of Laurel, Montana, sends this photograph saying it is a sample of the freakish weather they had this last spring. A total of 10 inches of snow fell. Mr. Darham has a place 60 miles west, nearer the mountains where three feet of snow fell in this storm. He says he has lived in Montana for 36 years and has never seen anything so out of line before.

A Talk to Beekeepers

By M. J. Deyell

I'm Taken Down a Peg

As I attend beekeepers' meetings over the country I frequently meet Gleanings readers who say, "Yes, this is Jack Deyell, I saw your picture in Gleanings." However, last fall down in Tennessee I met a Gleanings reader who actually told the truth. He said, "I would know you from your picture in Gleanings, but you are not as good looking as your pictures." I hardly knew what to say and after groping around a bit I replied, "Yes, if you ever get one look at my old mug you could never forget it."

This leads me to the verse I wrote recently after scrutinizing my mug rather closely in the mirror one morning while shaving. It runs like this:

"My old mug isn't pretty or nice,
None of the women will look at it twice,
But regardless of what I may do or say
I have to live with it day after day."

Well, there is so much to say this month that I hardly know how or where to begin. I aim to get out among the bees at least three times a week, sometimes oftener. Whenever there is propolis on my fingers it is easier for me to write than when I remain at my desk too long. The late A. Z. Hutchinson, Editor of The Beekeepers' Review, Michigan, used to say that he could write best with a lead pencil when his fingers were covered with propolis. I suppose that was because the pencil would stick to his fingers.

If we are willing to spend some time with the bees and are close observers, we can learn many things about bee behavior.

Escaping Honey

I have four small yards west of Medina, about 85 hives in all. That is about all I can care for efficiently. I would rather have 85 real colonies of bees than 185 hives with some bees in them.

The crop of white honey is rather small in the vicinity of Medina. However, there are a few supers of clover honey to take off. A few days ago I escaped a few supers in my yards and when I drove out to get the supers there were quite a

Editor M. J. Deyell

number of bees in some supers above the bee escape boards. In most cases there was only one shallow super above the escape. Under normal conditions, all of the bees should go down through the escape in less than a day, or a day and a half at the most. I stood there trying to determine why the bees in some of the supers had not gone down through the escapes. I then saw some drones among the bees that were still in the supers and that gave me the answer. The drones find it difficult if not impossible to pass through a bee escape. However, I have never watched them attempting to go down. The reason the drones were in the supers was because I had not put queen excluders on the hives where drones were found above. The hives that had queen excluders below the extracting supers had no bees in the supers at the time I took them off.

So this appears to be one more good reason for having each hive equipped with a queen excluder. However, some beekeepers do not believe in using excluders. I personally think they are an advantage when properly used. At least, I like to know where the queen is, or should be, in each hive. It is a nuisance when taking off supers of

honey to find patches of brood in the combs up in the supers.

Cross Bees

I wonder if any of you have had experiences I have had this season, like the following: I may have mentioned some cross bees in one yard by the railroad track, where the bees stung some section men one evening as they walked along the track at an inopportune time —just after I had been manipulating the hives. One really couldn't blame the fellows for using language that would not look well in print.

A short time after that episode I drove up to this apiary one day and when I stepped out of the car one of the bees nailed me on the back of the neck. Those bees were different in that they did not fly around my head, sparring for an opening, but wasted no time in coming straight at me with their stingers out ready for business.

During recent trips to that yard I have not been attacked by cross bees. In fact, I can walk through the yard while they are working and none of them will look at me.

I can't help wondering what has come over these bees to give them a change of heart. I was sure a while back that I knew which colony or colonies were guilty but the other day while checking through these colonies I found them as gentle as the bees in other hives.

Perhaps some of the old cantankerous bees have died off and the succeeding generation is better natured. I hope so, at least. If any of you have had similar experiences, I would like to hear from you. I should like to know why on a given day some bees are like angels and perhaps the following day they are like devils. It seems to me the condition of the atmosphere must have something to do with their temperament. Perhaps some of you readers can enlighten me. I still have a lot to learn about bee behavior.

Another Swarm

This has been a rather unusual season for finding small swarms or for having people call up regarding swarms they have found.

The manager of a coal yard called the other day to say that a swarm had clustered on some bushes near the railroad track. I went down with a hive containing some combs with a little honey and found a small swarm in a peculiar location, clustered in some brush and weeds. I put the hive entrance near the bees, supposing they would all go in. The next morning I went back and found most of the bees still clustered in the brush. I then lifted some of the brush above the frames, after removing the hive cover, gave the bunch of bees a shake and apparently dropped the queen into the hive because the next day all of the bees were inside.

Scale hive in Pelee Island, Ontario, queen yard, taken in August, 1949

The owner or finder of the swarm happened along while I was there and wanted to know if the bees would put up some surplus honey before the end of the season. Of course, that was a difficult question to answer because a small swarm in August does not ordinarily gather enough honey for winter stores unless the season is late and fall honey plants are abundant. Anyway, I am going to see what I can do to induce those bees to build up sufficiently strong in numbers to go through the winter.

Bees in the Attic

The other evening a lady a few

miles out in the country called up in an excited tone of voice to say that bees were getting into her house and some had already taken possession of a bedroom. I went out and found eight or ten bees on the window of the bedroom, trying to get out. Just how they got in there was a mystery because I could not see any bees on the outside entering a hole leading to a cavity between the sidings of the building, nor were there any openings that I could see from the walls into the room. Anyway, the lady felt relieved after she saw me catch the bees and put them outside the window.

Bee Work During September

This relates, of course, to beekeeping in this latitude. Beekeepers farther north or south, or perhaps on the other side of the globe, will have to govern themselves according to the season or conditions which prevail in different parts of the world.

Here in Ohio, in the vicinity of Medina, we usually have a goldenrod flow during early September, then the bees work white aster the last week in September until the middle of October. As a matter of fact, the fall honey flow in this vicinity has constituted the major part of surplus honey secured during the past few years. Some years ago, when alsike clover was grown extensively in this part of Ohio, we secured some good crops of clover honey.

In Western Ohio, where we have bees, some surplus was stored this season from clovers. In regions where bees get honey this month, the beekeepers need not worry too much about robbing because the bees are busy carrying in nectar. In some sections of the country there is practically a dearth of nectar following the major honey flow from clovers and this makes it difficult for beekeepers to manipulate their colonies without danger of getting the bees stirred up. It seems that bees have a tendency to rob more quickly following a good honey flow when nectar shuts off than during a season when there is a light or intermittent flow. At least, that seems to be the case in this locality.

Beginners should keep in mind the fact that hives should be manipulated only when honey is coming in. Once in a while a beginner will open hives during a cool spell of weather or when very little nectar is being gathered. This has a tendency to get bees stirred up and if the beekeeper lives in a town or city, neighbors may be stung. The situation naturally creates ill will in the neighborhood. By carefully selecting the proper time for working bees it is possible even in the backlot of a city to go through the season without having neighbors molested by the bees.

Sheep in a bee yard keep the grass mowed down very short and the sheep do not bother the bees.—Photo by Robt. J. Kroschel, Norwood Park, Illinois.

We have mentioned the importance of having hives of bees in a city or town surrounded by trees, shrubs, or a high board fence in order that the bees may have to fly up and over to avoid coming in contact with humans or animals.

A Final Colony Check-Up

Beginner beekeepers frequently inquire how many times a season or month a colony should be examined. It is difficult to give a satisfactory reply to such a question. In my opinion colonies should be checked at least once a month during the summer season and more of-

ten during the main honey flow, especially colonies run for section comb honey. For example, the colonies in Western Ohio that were devoted to comb honey production this year were visited once a week during the early part of the honey flow. This was necessary in order to check swarming. It has been our experience that if we can prevent colonies from swarming until they give up building swarm cells and the honey flow is under way it is unnecessary to examine brood chambers so frequently.

I might say that our method of producing section comb honey over double-brood chamber colonies worked out quite well this past season. We secured some beautiful comb honey.

One point in favor of the double-brood chamber colonies for comb honey production is that after the comb honey is removed at the close of the season the colony is likely to have an ample amount of stores for winter. As a rule comb honey colonies have more stores at the close of the season than do colonies devoted to extracted honey production.

I believe there is one other advantage in the double-brood chamber for comb honey, namely, that colonies are not so likely to put pollen into comb honey sections as in single-story colonies because the double-brood chamber provides more space for the storage of pollen and incidentally for brood rearing.

I realize that some of the experienced comb honey producers may not agree with me on this double-brood-chamber proposition but all I ask is that they give it a good try-out and perhaps they may be convinced that it saves a great deal of work.

During this month beekeepers should give their colonies a good check-up. Should inferior queens be found, they should be taken out of the hives and replaced with young prolific queens. Poor combs should be removed and replaced with good combs.

Ample Food Very Essential

It hardly seems necessary to again emphasize this point. A well-filled food chamber in addition to the honey found in the lower chamber should be reserved for winter stores. During the cool nights that come this month bees are likely to fill the combs in the food chamber and restrict their brood rearing to the lower chamber. This is exactly as it should be.

However, if the weather is quite warm during September, queens may lay very prolifically and bees may store a considerable amount of surplus honey in supers above the double-brood chambers.

As brought out in the August Talk, it appears to be an advantage to confine the queen down to the lower brood chamber under a queen excluder during the late summer and fall months in order that the food chamber just above the queen excluder may be entirely filled with honey for winter and early spring stores. The queen excluder should of course be removed some time in October at the close of the fall honey flow.

Don't Tolerate Weak Colonies

It was a waste of time to try wintering undersized colonies. They are likely to die before spring, so why waste honey on bees that will not live until spring? It is better to have 10 good strong colonies with plenty of honey in the spring than 20 weaklings that would require packages of bees to strengthen them, or combs of honey or sugar sirup to keep them alive.

In some parts of the Red River Valley Region of Minnesota commercial beekeepers divide strong three-story colonies at the beginning of the dandelion honey flow in the spring, giving the queenless divisions young laying queens. At the close of the main honey flow or before colonies go into winter quarters the two hives are united, the colony with the young queen being placed on top of the colony with the old queen. A well-filled super or food chamber is placed on top and this united colony is wintered in three stories.

It is obvious that such a strong colony will consume relatively less stores than would two colonies if left ununited. Furthermore, requeening is accomplished because the young queen, placed on top, will usually be retained while the old queen will be disposed of. This plan could be used by backlot beekeepers as well.

XUM

Editorials

Price Support for Honey As we have traveled over the country since the price support became a reality about two months ago, we have been interested in listening to the different reactions from beekeepers. The general concensus seems to be that the price support of 9 cents a pound for honey that is Grade B or better will tend to stabilize the market and perhaps serve as a floor price for honey.

Some beekeepers are of the opinion that the price should have been higher, based on at least 75 percent instead of 60 percent parity.

While some beekeepers are disappointed because the price support is not higher, we must keep in mind the fact that the responsibility for selling honey lies with the beekeeping industry. Producers and packers will have to make a greater effort than ever before to dispose of the crop at profitable prices.

It appears that the market has a stronger tone during the past month and it looks as though beekeepers who are fortunate enough to have secured a fairly good crop of white honey are not likely to dump it on the market but will hold it for at least a fair price. This speaks well for the future of our industry.

The Loaf of Plenty Marketing problems are like the seven-year itch. They are with us the year around. As soon as one honey crop is painstakingly disposed of, the beekeeper must begin planning and worrying about next year's market. Often this carry-over is barely sold by the time the new crop is ready for the extractor.

There's a 500-million-pound potential industry market that has hardly been tapped. If honey were used in only 75 percent of wholesale bread production, more than twice our entire annual output would be baked into crusty loaves. To the beekeeper, it would be the proverbial "loaf of plenty".

Now, under way at Manhattan, Kansas, is an 18-month research project devoted solely to finding out just what honey will do for bread. Honey hasn't been used extensively in baking up to now because such factors as moisture, acidity, flavor, and color are not consistent. Bakers couldn't predict their results accurately enough.

Under R. B. Willson of New York City the Honey Utilization Committee outlined a bakery research project to explore the problems of baking with honey. Yeast-raised sweet goods, honey-base cake, fruit cake, white rolls, and cracked, wholewheat, and white breads will be experimented on. As a conclusion to the project, honey purchase specifications will be set up as a guide to buyers and sellers.

The research program will cost $11,321. The Federation is assuming one-fourth of the financial burden, or $2,500. The other $8,821 is being paid to Kansas State College by USDA's Research and Marketing Administration.

Thinking in terms of the potential industrial market, the results of this could easily be worth $2500 to any commercial beekeeper. We're getting it, however, for the price of membership in the Federation. It is just another of the Federation projects tthat have bolstered honey prices in the past few years.

Change in Honey Price Support The Production and Marketing Administration of the U. S. Department of Agriculture on August 16 (Amendment No. 1) extended the time for contracts to be executed from August 15 to September 1, and at the same time limited eligible packers to continental U.S.

Packers who desire to participate in the Honey Price Support Program should sign the contract in quadruplicate on or before September 1, 1950, and forward all copies direct to E. M. Graham, U.S. Department of Agriculture, Fruit and Vegetable Branch, PMA, Washington 25, D.C., not later than September 5, 1950.

The following are the major changes which have been made in the revised contract:

Section 6—Sales to CCC. The section as revised provides that "CCC shall purchase from packer all eligible honey tendered to CCC". This includes honey which has a moisture content in excess of 18.6 percent but not in excess of 20.0 percent. However, CCC has the option of requiring packers to remove any excess moisture.

Section 6a—Sales to CCC. The final acceptance date of the first "Notice of Intention to Deliver" has been extended

from September 1 to September 15, 1950.

Section 10—Charges. This Section now specifies definite charges which CCC will pay for services rendered in connection with the operation of the program, omitting the previous provision calling for certain actual costs, if lower than the specified figures. It also provides that packers will receive the cost of containers, cartons, and labels used in connection with the honey purchased by CCC.

In addition to the above changes a few incidental changes have been made in Sections 6 (b), 11, and 17.

If History Repeats Itself Whether the current far beyond normal demand for granulated sugar is due entirely to hysteria, no one can say. Toward the late summer, sales of sugar normally increase because of the canning season. In many localities apples are going to be short. Housewives are honestly and prudently planning to can and preserve more cherries, berries, plums, pears, and other fruit. With good crops of cherries and poor crops of apples, the demand for sugar is always greater.

Having said all this, it is probably true that the almost overnight heavy demand for sugar that has forced grocers in many localities in the U. S. to put into effect an immediate unofficial rationing of the product, can be laid largely to hysteria, and to nothing else. American housewives resented not the necessity for rationing sugar but the way in which some of the rationing was done. For the most part, they are determined not to get caught again. If this hysteria were confined to a small percentage of out-and-out-dishonest hoarders, the effect on the sugar market would not be so great. As a matter of fact, in most localities the women, although they admit they are scared, are nevertheless buying mainly for summer and fall use—that is, they are trying to buy. In many cities they cannot get sugar at all, even though there is no shortage. In many others they can get five pounds or only two pounds. The rationing is an attempt on the part of the distributors to treat the public fairly, and to do that they wish to prevent those having the money from hoarding sugar for a year or years ahead.

There is plenty of argument to disprove the theory that prices of honey fluctuate with prices of sugar. However, there is also plenty of proof that whenever sugar gets tight, honey prices advance. This is entirely logical. Of course, the advance is finally followed by a recession when sugar becomes cheap and plentiful again. Honey producers universally deplore war in any form, and yet if history repeats itself honey prices are likely to stiffen following difficulties in the buying of sugar.

Beekeeping Again Commercialized While attending a beekeeping meeting in Western New York recently, one of the speakers mentioned the fact that this year, more than during several recent years, the number of beekeepers in the state has decreased while the number of bees has increased. This means that bees are again getting into the hands of commercial beekeepers and out of the hands of some backlot beekeepers.

There is this to be said in favor of more backlot beekeepers: bees spread over an area in small apiaries are likely to bring about more effective pollination than larger lots of bees concentrated in fewer locations covering similar areas.

We need more large and small apiaries throughout the country. The backlot beginner beekeepers should be encouraged. Most of our large commercial beekeepers started with only a few hives of bees.

Bees in Dwelling Houses It seems that we have had more calls this past season than ever before from those who have bees between the walls of their dwelling houses. Most people who call up expect us to drop everything and go out and take the bees away. Obviously, the problem cannot be solved as easily as that. If the bees are well established between the walls of a house it is necessary either to cut the sides of the building away in order to get the combs of honey and brood out of the enclosure, or trap the bees out by means of a bee escape. In the latter case it is necessary to have a hive containing at least one comb of brood with some honey and bees, and if possible a queen, to attract the bees into the hive as they come through the escape from the siding of the building.

In some towns and cities there are beekeepers who make a busi-

ness of capturing swarms in buildings, charging a reasonable price for their services. Here is an opportunity for some enterprising beekeeper in each town or city to earn a little on the side and, incidentally, to increase the size of his apiary.

Due to the importance of bees for pollinating farm crops, it is inadvisable to destroy the bees in the building with Cyanogas as some do. Our country actually needs more bees than we have at the present time.

Don't Count Your Chickens Before They are Hatched It is an easy matter to over-estimate the crop during the honey flow or even at the close of the season. When a honey flow shuts off suddenly, some of the honey is going to be used as bee food, especially when colonies have a large amount of brood for the bees to feed.

Beekeepers who live in localities where there is a late summer and fall flow are not so likely to experience this crop shrinkage as are those who have no late summer and fall honey plants from which bees store surplus.

The best time to estimate the crop is after it is off the hives, extracted from the combs, and in 60-pound cans. It is then a comparatively easy matter, with a pencil and paper in hand, to know exactly how much honey has been produced.

Lack of Honey Signs After making a 2000-mile trip into the Red River Valley recently the writer saw comparatively few roadside honey signs. Beekeepers who live near well-traveled highways miss a grand opportunity if they do not erect honey signs and build an attractive honey stand at the roadside. It is necessary to have one or two approach signs on either side of the stand to give drivers of cars an opportunity to slow down before reaching the honey stand.

Some honey producers sell practically all of their crop at the roadside. This is one way to reach the consumer without the honey going through the hands of dealers.

Some city dwellers carry the idea that products obtained direct from the farm are much better than those which they buy from grocers. For example, when they see a roadside stand and notice the hives of bees back in the orchard they will say, "Well, that must be pure honey."

Some years ago the writer had a small roadside stand near a railroad crossing, on the lawn of a dwelling house. The engineer of a freight train, having noticed this honey stand day after day, decided one day to stop his train and get two pails of honey. This simply brings out the power of advertising. If we do not let people know we have a product to sell we surely will never sell any of it. Honey has to be brought to the attention of prospective buyers and roadside signs and stands do accomplish this.

Cross Bees During the season we receive reports from beekeepers over the country saying that a few of their colonies are quite cross and exceedingly difficult to handle. In some instances the bees attack animals and humans near the apiary.

When such bees are kept in towns and villages, not to mention cities, it is easy to understand why some people near the apiaries object to the bees.

In some instances skunks molest the bees during the night, scratching on the hive entrances. This enrages the bees to such an extent that the following day when the owner attempts to manipulate the hives he is stung.

However, some colonies are just "ornery" and as a rule this is because the bees are hybrids. In some cases bees may be stirred up as a result of the owner's attempt to manipulate the hives when the weather is cool or when no nectar is coming in. As a rule most bees are comparatively easy to handle when the proper amount of smoke is used and when they are bringing in nectar or pollen.

It would appear that bee breeders must endeavor to select breeding queens from a strain that is known to be reasonably gentle. As our population increases it is going to be more and more essential to have bees that can be handled easily. Breeders should endeavor to combine gentleness with industry. We must have bees that are gentle to handle, especially when they are kept in thickly-populated areas.

From North, East, West and South

SOUTHERN CALIFORNIA, Aug. 3

Weather: July was a delightful month as far as weather was concerned. The nights and mornings were quite cool with the afternoons somewhat warmer. There were some thunderstorms in the mountains and desert and a few showers in scattered spots. Other than that no rain has fallen during July.

Condition of Plants: About the only plants from which nectar is gathered at the present time are the alfalfa and cotton. In the Imperial Valley the blossoming time of alfalfa is practically over. Quite a large acreage there was allowed to go to seed. Farther north there is still honey coming in from the alfalfa. In the San Joaquin Valley the cotton is just about in its prime and should produce an average amount of honey.

Market: The honey market seems to be rather dull at the present time. Even with the government price support there seems to be a feeling of uncertainty with both the producers and buyers. One reason for this feeling is the fact that there is quite a hold-over of honey from last year. Producers in some cases held their honey hoping for a much better price when the Department of Agriculture would take action on the honey price support bill. Now with the unsettled condition of the country buyers are afraid to stock up too heavily. Where sales are made prices seem to range from nine to ten and one-half cents per pound delivered to the packer's plant.

Miscellaneous: In the Imperial Valley some very good crops have been made from the alfalfa. One large producer averaged nearly a case per colony. Climatic conditions seemed to be unusually good this summer and this man's bees were located where there is plenty of alfalfa grown for seed. Perhaps another reason for the excellent crop is the fact that the honey was extracted very rapidly. One day two men extracted 77 cases in nine hours. That left the combs ready to be filled again while there were plenty of blossoms. We have always been of the opinion that the bees like to have ample room for the nectar they bring in.

From all reports prices paid for bees for pollination purposes range anywhere from $1.50 to $10.00 per colony. The variation in prices comes from the fact that some legume producers give a stated price per colony while others give a smaller rental price and a share of the crop. The University of California's College of Agriculture at Davis is putting in considerable time and thought on the subject so as to try to make fair dealings for both the grower and the beekeeper.—L. L. Andrews, Corona, California.

NORTHERN CALIFORNIA, Aug. 1

The Weather: When I left Davis July 13 for a visit to many places of interest, in search of new ideas and to learn how others were keeping bees, the weather was quite agreeable but on the dry side. There had been but one slight rain to break the record of many years' standing but of no importance as far as actual rainfall was concerned. The shortage of rainfall during the winter and spring seasons, more than four inches, was resulting in the drying up of natural vegetation and could mean a shortening of the honey flow from the yellow star thistle, or what is left of it following weed control methods.

Honey Marketing: The Honey Marketing Committee had met with the packers and processors in San Francisco on the 7th of July and had agreed to support a Honey Marketing Order if it was acceptable to the producers, providing a "fair trades agreement" could be included in the Order for the sale of honey in the Bay Area. The wording of this fair trades agreement was to be worked out by a committee of the packers within the next few days after the meeting and I am without information as to their recommen-

XUM

dations. As proposed at the hearing of the Committee, the handlers of honey would support a Honey Marketing Order to the extent of five cents for each 60 pounds of honey processed for marketing in California if the producers would support it by a like amount. The sum was to go to a fund for use in promoting research in new uses of honey and for increasing the demand for honey by advertising. It was thought that the fund, or a portion of it, could be used for support of the American Honey Institute which would also aid in the honey production campaign in California, and for the state's participation in the work of the American Beekeeping Federation. Final action on the Honey Promotion Program is to be taken at the annual meeting of the California Beekeepers' Association scheduled for San Diego during the early part of December. This self-help program is being investigated as a means of putting a foundation under beekeeping in California. It is the hope of its backers that beekeepers and honey processors in other states can do likewise through their state marketing organizations.

Crop Prospects: The honey crop in California is shaping up a little better than last year but nothing to get very excited about. The total crop may be reduced by many thousands of colonies of bees which are being concentrated in the legume seed areas in such numbers that surplus honey cannot be expected in commercial quantities. In fact, in the Ladino clover territory, where more than two colonies per acre are located, some colonies will have to be fed their winter stores.

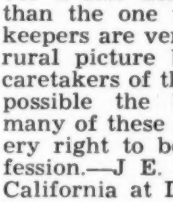
Miscellaneous: Crop Prospects through Nevada, Utah, Wyoming, Nebraska, Wisconsin, Minnesota, Illinois, and North Dakota appeared to be better than average IF the rains stopped and IF favorable weather prevailed during the remainder of the season. Swarming was reported more troublesome than usual, following on the heels of heavy winter losses. In some cases losses amounted to as high as 40 percent in large outfits. These losses generally occurred in the spring, well after the start of brood rearing, and because of a late and prolonged cold spell. According to Dr. M. H. Haydak's report for Minnesota, packed colonies came through much better than unpacked.

Interest in pollination of legumes is widespread in the above-mentioned states but many beekeepers are unwilling to give up good honey locations for the prospective returns from rentals or from shares in seed crops. The competition between the various legumes in the midwestern states is far greater than in the irrigated regions of the West. This may require a still greater concentration of bees in the seed areas.

After driving some 3000 miles to reach Detroit Lakes, Minnesota, I was struck by the scarcity of honey signs, or apiaries, along the highways. Every other item but honey seemed to be advertised. The three or four different signs I counted in this entire distance were rather inconspicuous. I wondered why some one did not put up a sign that would read "Where's your HONEY?" a short distance before a sign that would say, "Here's your HONEY" or "Pick up your HONEY here" or "Your HONEY is waiting, one-half mile". More attractive signs and honey displays along main highways would sell a lot of the so-called surplus, or would encourage many to buy honey in the regular markets.

The fertile fields, lush crops of corn, grain, legumes, the beef and dairy cattle, substantial homes and farm buildings of the midwestern states are eloquent reminders that this is a land of plenty and the best antidote for communistic and dictatorial tendencies. It makes one wonder how any person could ever favor a less democratic form of life than the one we enjoy. And beekeepers are very much a part of this rural picture because they are the caretakers of the insects which make possible the bountiful harvest of many of these crops. They have every right to be proud of their profession.—J E. Eckert, University of California at Davis.

WYOMING, August 9



Weather: Our spring weather was two weeks or more late. Cool weather persisted until the last of May. Much gardening normally done by May 15th was delayed until the first week in June. July gave

us 2.24 inches of rain, which was slightly above normal but it was ill timed and came the latter part of the month after the vegetation had commenced to wane. At present the ground is parched and the weather man indicates the August rainfall to date with three cyphers.

Bees and Crop Outlook: Bees got a good fill up from dandelions—the best for some years—and swarming was heavy for a short time in June but with scant moisture in the ground a few days of warm wind slowed the bees down almost over night, it seemed. In most localities they are just barely making a living and only prime colonies have a small amount of surplus. Only a most favorable turn in the weather within the next very few days can prevent our having a very small honey crop, in spite of the fact that bee power is ample. I know of two large producers hereabouts who have supered their bees well and taken off to other pursuits because of the discouraging situation.

Honey Market: Honey sales are lagging a bit even for the summer season. It's just too bad honey is not used exclusively for canning fruit. The improved flavor is well worth the slight extra cost and without doubt this would be more than offset now that the healing arts have raised their office calls from $1.00 to $2.00 and now $3.00 with a corresponding raise at the drug store. It might take a bit more than "the 30-day test" to prove it, but I still have hopes that the public will some day understand that much illness would be avoided by the use of natural sweets, of which honey ranks first, instead of refined sugar. But that's striking at big business, which ranks you as a communist.

Miscellaneous: Reports continue to come in of heavy losses of bees by poison sprays. Here again natural means are much the best. Composting in your garden eliminates the need of commercial fertilizers and after a few years you find you are not using the insecticides you formerly did. We have been using this method only two years but are seeing great improvement. We had ripe tomatoes before any of our neighbors. I read of citrus groves being handled the same way. Maybe Nature does know her stuff.

This community was saddened to hear of the sudden death of the little daughter of Harold Gilbert of Sheridan, Wyoming, a few weeks ago as the result of a bee sting. Mr. Gilbert was our state apiarist at Laramie for some years, coming to Sheridan a few years ago to take over the business of his father-in-law, A. H. Garard, diseased.—Earl C. Reed, Ranchester, Wyoming.

TEXAS, August 10

Weather: Typical summer weather prevailed during July with the temperature high although not abnormal. Rainfall was rather variable and erratic with precipitation deficient in South, Central, and East Texas. Most points in these areas experienced no rainfall of any consequence. In many northern and the usually dry northwest sections rainfall was reported above normal.

Bees, Plants, and Honey Crop: Most of the clover honey has been harvested with the yield generally above that of last year. The flow from cotton is later than usual but in favorable locations cotton is yielding well. However, with continued dry weather the flow likely will be of short duration. Broomweed is abundant over a wide area but with the continued drouth prospect for the fall bloom is less promising than a year ago. This must be considered during the late summer extracting to avoid colonies light on stores for the winter. Over most of the state the main flow is over and colonies are now showing considerable decrease in brood rearing.

Market: Producers are marketing in large volume through cooperatives and independent bottlers. Price support has stipulated movement to a large extent. Retail grocers are well supplied with stock of high grade honey. A comparison of prices of identical grade and pack on different retail markets shows a price range of 5 cents per pound. Consumer demand remains rather slow.

Miscellaneous: The Honey Report

XUM

of July 1 of the Bureau of Agricultural Economics, U. S. Department of Agriculture, shows a total of 317,000 colonies of bees for Texas in the present year, which is 2 percent above the number for 1949.

From all indications the honey crop for Texas in the current year will exceed the earlier record crop of 1949.

Migration has become a well established practice in commercial beekeeping in Texas, although fewer colonies are now moved to other states than in former years. In the spring the apiaries are concentrated in the citrus or brush areas in South Texas and later moved to vetch, sweet clover, cotton, and alfalfa within the State at Points farther north. The increase in amount of honey harvested justifies the increased cost of operation incident to moving the yards and our agriculture is materially benefitted by the pollination service provided.

Further reports from the Lower Rio Grande Valley indicate that most resident apiaries suffered loss from arsenical poisoning with some beekeepers sustaining practically total loss. Losses are reported also from cotton fields in the Black Land area in Central and North Texas. The use of organic insecticides in recent years resulted in little loss of bees. However, the heavy insect pest infestation of cotton this year again brought calcium arsenate into wide use with consequent loss of bees. From losses suffered this year probably fewer colonies will return to the Valley or operate in the Black Land area after the clover bloom. Farmers will find beekeepers more hesitant to provide bees for pollination service so long as the poisoning hazard exists.

Price support of honey is only a temporary expedient for the marketing problem. Honey, like any other food product, must be brought to the attention of consumers through advertising. Every beekeeper can develop his local market. Distant markets can be expanded only through combined effort of beekeepers toward organization.

Every beekeeper should support the American Honey Institute and the American Beekeeping Federation and attend the meetings of his state and local beekeeping association. Texas beekeepers are again reminded of the state meeting at College Station on October 2 and 3. —A. H. Alex, College Station, Texas.

MANITOBA, August 4

Weather: This land of optimism and opportunity has provided us with a tpye of weather to test the most optimistic during the past few months. The cold winter weather carried on until well into April and then when spring did come, the melted snow poured into the Red River Valley in such volume that the result was one of the worst floods in the history of the province. The valley area from Winnipeg south to the International boundary became one big lake 20 miles wide in places. General property damage was appalling but loss in bees and equipment was not extremely high. This was due to the fact that the flood was sufficiently early that package orders could be cancelled. In addition to this, honey crops have not been good in the Valley since the advent of sweet clover weevil and as a result the colony population is not as high as it used to be.

A colony in my own back yard came through the flood in fine shape floating on a temporary raft which was tied to a tree. The water under the colony reached a height of about 11 feet. The height of water on the main floor of the house was about eight feet. Something over 100,000 people evacuated the city of Winnipeg during the flood period.

Beekeeping Statistics: Beekeeping statistics may not be 100 percent accurate but they do give a basis of comparison of colony populations, honey production, etc., one year with another. In 1948 there were approximately 75,000 colonies of bees in Manitoba. In 1949 there were about 50,000 colonies, and this year there is a further drop of 25 to 30 percent in colonies.

This drop is more drastic in the northern great plains area where annual purchase of package bees is the normal method of keeping bees. However, decline in this area indi-

cates the general trend throughout Canada and the United States. In acknowledging this decline it is necessary to remember that considerable expansion of the beekeeping industry took place during the last war. Since the war many industrial users have stopped buying honey and markets have shrunken to a considerable extent. Profits from keeping bees have been such that many have reduced their holdings or gone out of business.

The situation with which we are now confronted is not only that a reduced number of people are making money from the sale of honey but also that the sum total of pollination is reduced. It is obviously desirable from the standpoint of the national economy to have the maximum number of pollinating insects at work. Therefore, it is desirable that beekeeping be a thriving business.

Dry statistics show us that there has been a decline in beekeeping and it has followed closely behind a depreciation in marketing conditions.

Consumer demand is the main valve which regulates the size, scope, and prosperity of every phase of the beekeeping industry. The challenge before every beekeeper who wishes to stay in business is to do all he can to increase demand regardless of whether he sells independently or ships to a packing plant.

We must appreciate the fact that honey is intrinsically a very desirable carbohydrate food. It has a much higher consumption potential but it appears to be losing out in the competition with inferior foods because they are consistently clean, well packed, and uniform, whereas honey is all too often damaged by the beekeeper, lacking in uniformity, not attractively packed, and often badly merchandised.

Need for continuous improvement of the product and merchandising methods is generally accepted as a vital necessity. There does, however, seem to be a great lack of appreciation among most beekeepers of the honey advertising power of the thousands of honey producers throughout the country. If more beekeepers and beekeepers' organizations could be encouraged to show honey at fairs, to put up displays, to attach honey streamers to their trucks, to display clean honey houses, and to accept more responsibility for boosting the product, there would be more hope of maintaining a prosperous honey industry.

General: The present price of sweet clover seed has encouraged farmers to put in more sweet clover than has been the case during the last few years. More requests for bees for pollination have been received from farmers this year than all past years put together. Until recently most farmers looked upon pollination as a natural phenomenon of interest only to botanists, entomologists, and the like.

Grasshoppers are emerging very late this year and some farmers will be spraying clover fields with chlordane and aldrin. George Knowlton of Utah has been doing an excellent job of finding the facts and giving the information with regard to harmful insect control in clovers and alfalfa without destroying pollinating insects. He recommends that farmers who have to spray clover or alfalfa in bloom use toxaphene and apply it after bees have stopped flying for the day. Toxaphene has proved to be less harmful to bees than other poisons and still is effective for control of several important pests.

The flow here is much later than normal. Prospects are for a somewhat better than average yield per colony.—E. C. Martin, Provincial Apiarist, Winnipeg, Manitoba.

SASKATCHEWAN, August 8

Weather: The weather during the spring and summer has been generally satisfactory for building up colonies. In fact, in some cases bees have built up too rapidly and reached swarming strength before the honey flow came on and are proving very difficult to handle, particularly since we have experienced an unusually high number of days since the commencement of the honey flow that have been dull or rainy. Our July precipitation has been heavier than usual and we now have ample moisture in prac-

XUM

tically all parts of the province until fall.

Pasture: This year there is an unusually large acreage of both yellow and white sweet clover in bloom, particularly in Northeastern Saskatchewan and we were fortunate that there did not appear to be any weevil damage until recently. Now, however, there seems to be a considerable amount of weevil damage in almost mature clover and many farmers are very concerned about the poor set of seed and are at a loss to know what has caused the poor set of seeds in some fields. Ordinarily, in this northeast territory of the province seed yields from clover are very heavy, ranging anywhere from 1000 to 1400 or 1600 pounds per acre, and unless clover sets better from now on many farmers are going to be very badly disappointed in the returns this year.

Honey Flow: Dull, cool weather during the last ten days or so has been holding bees up very seriously but whenever the weather brightens up, bees are working well and we find that honey is coming in very rapidly. All we need now for the next two weeks is bright sunny weather to give us an average or better than average crop of good white honey.

Market: The Canadian honey market still has some surplus from 1949 honey remaining and lacking the Government price supports which the United States beekeepers are receiving. The trade here does not show much confidence in its buying and prices are continuing on at a very low point.

Unlike the United States Government which has instituted a price support program this year, the Canadian authorities are taxing an already overburdened market in their attempt to market 2,000,000 pounds of white honey which they purchased from beekeepers a year ago. The Government's sudden decision to offer this honey for sale has prevented so far any sign of strengthening on our honey market and unless production across the country is much below last season it will be difficult to increase prices on honey very materially as they must be increased if beekeepers are going to stay in business.—R. M. Pugh, Tisdale, Saskatchewan, Canada.

NEBRASKA, August 1

Weather: As this is being written the mercury stands in the high 70's, one of many like temperatures during the month of July. This usually torrid month was the coolest and wettest on record. No single day did the temperature soar beyond the 80's and at one time actually touched 39 degrees in the western part of the state. June had been unseasonably hot with marked moisture deficiency and return of the dust bowl days was being fearfully predicted. Then came the rains! July 8 brought 7½ inches to our vicinity and over 13 inches to our neighboring county of York. Flood, hail, and tornado damage ran high throughout the month.

Crop: Crop yields have been less than earlier favorable conditions had promised. This, however, has been due to excessive rains and the cool cloudy weather which cut the bees' working time at least in half. The bloom on sweet clover and alfalfa is luxuriant now, though, and with good, hot, clear weather the bees will make up for lost time. The quality of the honey is excellent and of good body. The abundant bloom of smartweed also promises a heavy fall yield of the darker, stronger-flavored honey. Rain-filled ditches and lowlands are a mass of this pink flowered plant which has started to bloom the past week. The smartweed honey is fine for winter stores and the bakery trade.

Miscellaneous: Our present experiences in regard to the renting of bees for pollination purposes in alfalfa acreages lead us to believe that there is a future in this for the beekeepers. Marked interest and cooperation has been shown this season. Where seed results in the past years have been disappointing it has been noted that too few bees have been used per acre of alfalfa. Our county agents recommend a minimum of two colonies of bees per acre of alfalfa. Beekeepers should go all out to cooperate. They should advertise early in the spring for these services. If the farmer sees that spraying will be necessary, it should be accomplished before

bloom, otherwise this will kill the bees.

We have sold honey for a variety of uses over the years, but none more novel than one recent sale. This honey devotee uses it for fish bait and swears it is the best ever. Cotton pellets are soaked in honey and then attached to the hook. Guess fish know what's good!

Another interesting use for beeswax was brought to our attention recently. Our prospective purchaser had been applying beeswax to newly resurfaced meat blocks in meat markets and other stores. — Benj. Nielsen, Aurora, Nebraska.

MAINE, August 16

Weather: This has been a good season for bees and honey gathering, with just the right amount of rain falling to make a natural nectar flow.

In some sections of the state there has been a continued dry spell for the past two years. This year showers have relieved the situation to some extent.

Bees and Plants: Bees built up fast during this spring and early summer, with quite a bit of swarming reported. Some beekeepers welcome swarming, while others do not. I, for one, take it in stride as there are times when one misses doing the right thing at the right time.

Honey plants are in prime condition this year, with goldenrod, buckwheat, and aster covered with bees most of the time.

Market: Honey has moved slowly during the spring months, but the sales have picked up as the season advanced. Some beekeepers have part of last year's crop not sold at this time, but I see no need for that if proper sales efforts were used.

There has been a steady demand for chunk comb honey with the usual extracted honey sales. Out-of-state tourist trade helps the Maine beekeeper to a large extent to dispose of his honey products. It seems that the flavor of our honey is a deciding factor toward repeated sales year after year.

Miscellaneous: The field meetings this year, held in different sections of the state, have been poorly attended. This seems unfortunate, as the different ones who have made special efforts to have them successful have their work for nought. Maine beekeepers will have to show more interest in the state and county associations and make a bigger effort to support them. The continuance of these associations will be assured by better attendance at all meetings, increased membership, and greater financial support by all.—Edward M. Wills, Kents Hill, Maine.

ARIZONA, August 14

The dreams of many beekeepers are now becoming a reality. There are several fields being tested this year under the supervision of Frank Todd, S. E. McGregor, assistant to Mr. Todd, and the staff connected with the University of Arizona.

Most of this work was satisfactory, yet they found the bumper crops they hoped for failed to materialize. There will be a report at the pollination meeting scheduled for October 24, 25, and 26, 1950, in Tucson, Arizona. Clarence Benson, Secretary of the Arizona State Beekeepers' Association, will act as Chairman of this meeting.

Our citrus crop was a failure due to the freezing past winter which damaged the trees. The desert was fair—good in some locations, especially catsclaw, which produces a premium grade honey. Alfalfa has made a bumper crop, supported by cotton that followed, starting early in July.

The cotton close to the alfalfa seed crops is one of the problems facing us, that may restrict the districts, or the turning to seed the early second cutting to be sure of a thorough pollinization of the entire field before the cotton blooms. —Roy Hastings, Mesa, Arizona.

Our Cover Picture

This month's cover picture was taken by Scoutmaster Merle Frederick at Valley Forge during the National Boy Scout Jamboree held June 30 to July 8. The Jamboree was attended by 47,000 Scouts from all parts of the Nation. Troop 20 of the Akron Area Council, Ohio, worked the theme of their exhibit around the honey bee. Their observation hive of live bees attracted a great deal of attention at the Jamboree.

XUM

Wisconsin Summer Convention

By H. J. Rahmlow, Secretary

Grading Law Improvements and Pollination Prove Interesting Topics

The two summer conventions of the Wisconsin State Beekeepers Association at Devils Lake Park on July 25 and the Eau Claire Lake Park on July 26 were well attended and the program excellent. There was hardly time enough to hear from all the out-of-state speakers who visited Wisconsin on the tour from Illinois to Minnesota.

The meeting opened with a report from growers on the honey crop. All sections reported very good prospects with the exception of a few where early summer drouth had injured plants. Some parts of the state reported the best crop in years and the honey of wonderful quality.

The Color of Honey

Mr. John Long and William Waterman of the State Division of Bees and Honey opened the session on this question: "Shall we omit the color requirements on labels on glass containers of honey?"

Discussion: Those in favor argued that anyone can see what the color of the honey is in a glass container; the color does not indicate the flavor or taste of the honey. In answer to the argument that we would be taking a step backward, it is suggested we take a step forward and require a statement of several principal floral sources which give flavor to honey and which some people either like or dislike. These might include buckwheat, basswood, clover, and miscellaneous flowers.

At the Devils Lake meeting the vote was 3 to 1 in favor of eliminating the color statement on glass containers, while the Northwestern Beekeepers favored the proposal by a majority of only one vote.

Auction for Honey Institute

William Waterman proved an able auctioneer and raised $60 for the American Honey Institute by selling donations brought to the meeting. Walter T. Kelley of Paducah, Kentucky, brought 27 hybrid queens which were sold at from $1 to $2 each. H. C. Braithwaite, President of the Sauk County Bee Association, donated honey and dis-

Some speakers at the Devils Lake meeting: Left to right: M. J. Deyell, Medina, Ohio; Dr. J. E Eckert, Davis, California; Mr. and Mrs. Walter T. Kelley, Paducah, Kentucky.

pensers. The Marshfield Mfg. Co. donated sections. The G. B. Lewis Co. donated new-type foundation and frames. The Dadants gave two books on beekeeping.

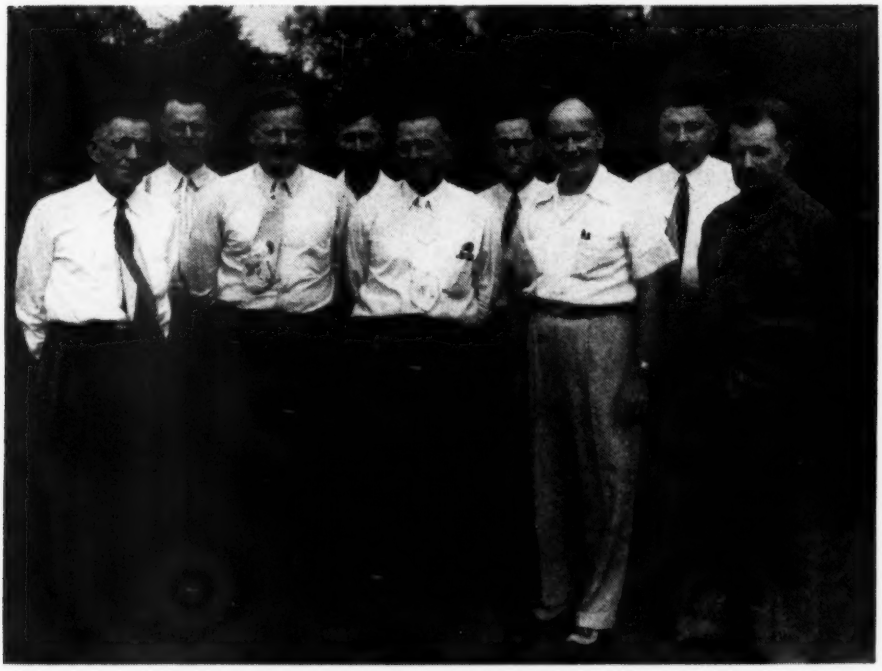
Mrs. Harriett M. Grace of the American Honey Institute opened the afternoon session by saying the Institute is an educational trade association governed by a board of nine men, and that every producer should be a member. She is doing excellent work to increase the use of honey in the industry. General Mills is now using 1½ million pounds of honey in a new food. "Honey gives smoothness to ice cream," she said. It is a quick energy food and contains 101 calories per tablespoonful.

The value of promotional articles on honey published by newspapers and magazines during the past year, if paid for on an advertising basis, would be worth $750,000.

Mr. and Mrs. Chas. Dadant of Dadant & Son, Hamilton, Illinois, were with us. Charles gave a short talk saying that the Illinois crop looks good. We enjoyed having them with us.

C. G. Langley, Red Wing, Minnesota, Past President of the Minnesota Beekeepers' Association, and on the Executive Committee of the National Federation, stated that beekeepers need a voice that can be heard in national affairs—in Washington. The Federation has been active in getting help in pollination, price support, and recognition of beekeeping. Recently 1½ million pounds of buckwheat honey was sold to Holland through the Marshall Plan Aid at the instigation of the Federation. He said the present floor price of 9 cents for honey will tend to stabilize the market. There will be no more 6 cent per pound honey with price cutting all along the line. He feels the Institute and the Federation both have their place and should keep in their separate fields.

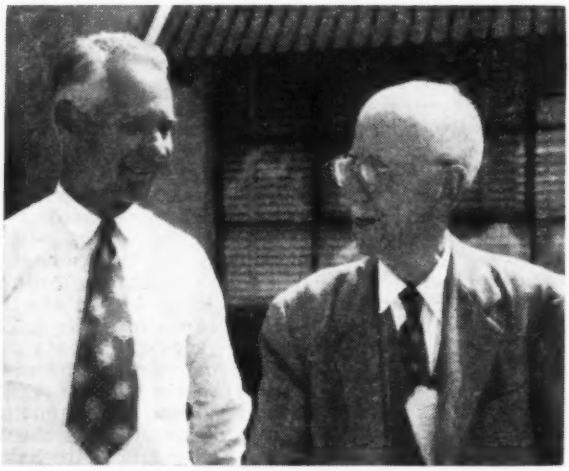
(Continued on page 574)



Officers and speakers at the meeting at Eau Claire Lake Park. Left to right: Robert Ladysmith, President; Newton Boggs, District President, Viroqua; William Waterman, Division of Bees and Honey, Madison; E. Schroeder, District President, Marshfield; Henry Schaefer, National Federation Committee, Osseo; C. G. Langley, Red Wing, Minnesota, Executive Committee, National Federation; Art Kehl, G. B. Lewis Co., Watertown; Roscoe W. Franks, Ohio Honey Co-op., London, Ohio; and John Long, Division of Bees and Honey, Madison.

XUM

Dr. J. E. Eckert Visits Medina



Dr. J. E. Eckert, one of America's leading bee scientists, stopped at the A. I. Root Co. in Medina on August 8 on his way East. Everyone was very pleased to meet this friendly and modest gentleman from the University of California at Davis. The above photo shows E. R. Root and Dr. Eckert after having lunch with H. H. Root, Jack Deyell, and several others of the Gleanings staff. The picture below shows Dr. Eckert standing by the plane in which John Buchanan of Gleanings took him on an air tour of the Root pollination projects. Dr. Eckert is currently taking a trip visiting bee-keeping associates in the East and will soon return to his important work in California. Dr. Eckert is co-author of "Queen Rearing" which he wrote in collaboration with H. H. Laidlaw.

Siftings

"It requires 30 minutes of working time to buy a pound of bacon in U.S.A.—but it takes 466 minutes in Russia, according to the U.S. Department of Labor. Further eloquent testimony to the relative low cost of America's efficiently produced food."—From July 1950 Rural Marketing.

"Last year I bought some hybrid bees, one colony of which was nearly black. Into this I introduced an Italian queen on August 20. As she did not breed very much last fall, of course the bees going into winter were mostly hybrids. I watched this colony closely and learned something new when I tell you that there were quite a number of nearly black bees in and out of the entrance on July 4 of this year; hence these bees were nearly if not quite ten months old."—G. M. Doolittle, Borodino, New York.—Taken from August 1889 Gleanings.

"Honey converted into bees will bring a higher price than honey sold on the market because those bees contribute to a much larger yield."—Dr. C. L. Farrar, Madison, Wisconsin.

"It need scarcely be said that the honey bee is a socialist and that the beehive is a center of pure socialism. This center of socialism has its good features, for in it we see faithful adherence to duty, unfailing endeavor and absolute unselfishness. When a colony dies from starvation, practically all of the bees die simultaneously, for the last drop of honey is shared until not a bit is left." — From Allen Latham's Bee Book.

"There is nothing more easy to produce than imaginary honey and I know of nothing more difficult to sell. To make honey production pay, you must produce the real thing—honey that you can extract, fill into cans or bottles and sell."—R. O. B. Manley in his book "Beekeeping in Britain".

It Finds the Lady—A "divining rod" which detects the queen in a hive of bees (one, it may be, in a stock of 50,000) and a device which sounds an alarm when the hive is about to swarm and leads the bees to a new home, have been demonstrated in London, England. These two inventions are the work of Gilbert Tomes, television expert and former B.B.C. engineer, of West Wickham, Kent. The secret of the devices is a special active material. A spot of it on the queen results in an alarm being sounded, hive exit closes automatically, and the queen leads the swarm into the spare hive provided.—The Farmer and Stock Breeder.

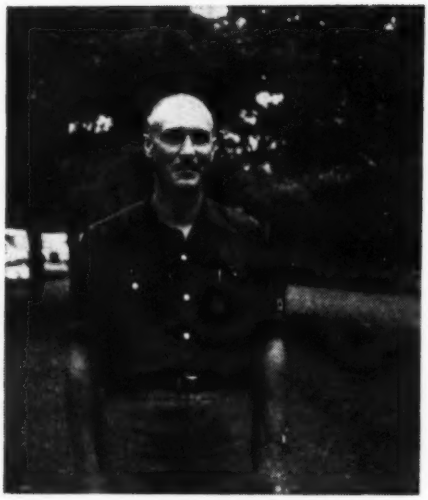
"Failure to provide plenty of food for bees appears to be the beekeeper's chief shortcoming."—E. C. Martin, Apiarist for Manitoba, Canada.

Development of Larva—When a cell is sealed on the ninth day, the entire interior of the cell is lined with a delicate but tough silken cocoon spun by the larva and secreted by special glands which become active at this time—the silk glands. To accomplish this the larva has to turn lengthwise of the cell at least twice. This consumes about one day's time. The larva now becomes a semipupa or pronymph. After about three days in this stage, or four days after capping, the semipupa moults its larval skin and becomes a pupa with the form and all the parts of an adult bee. These legs, antennae, etc., have been developed rapidly during the semipupal stage but were covered and therefore hidden from view by the larval skin. On the eleventh day after hatching, the eyes begin to turn from white to pink which color later turns to reddish-brown and finally on the sixteenth day to black.

"The best stimulation to brood rearing is an abundance of sealed stores. All other methods are poor substitutes."—From March 1950 issue of New Jersey Beekeepers' Association News.

"Prosperity does not start at the factory payroll window but comes from the ground up. Soil makes big business possible."—Tom Kelly, nationally known soil consevationist.

XUM



Dr. Robert Volgenau of Buffalo, President of the Western New York Beekeepers' Association.

Dr. E. J. Dyce Professor of Beekeeping at Cornell University.

Western New York Meeting

By H. H. Root

The Western New York Beekeepers' Association had their summer meeting on August 5 at County Park, Akron, New York, some 20 miles east of Buffalo. A good crowd was present to hear the principal speakers, Dr. E. J. Dyce and Dr. William L. Coggshall. The program was held in a pavilion, although the day was perfect—neither too hot nor too cold.

Much interest was taken in Dr. Coggshall's survey indicating that in most New York counties the number of colonies has been increased while the number of beekeepers have decreased, indicating that beekeeping is being commercialized more and more.

H. C. Harvey brought along his honey heater made up of two square galvanized tubs having rounded cor-

E. G. Friedrich, his son-in-law Mr. Jividen, and their families, from Buffalo

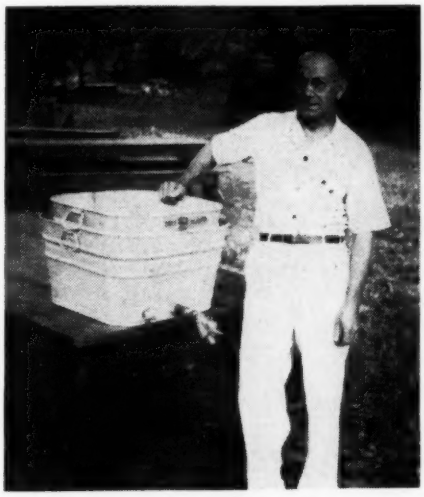
Geo. E. Norris, Secretary, and Mrs. Norris

Dr. William Coggshall, Assistant Professor of Apiculture at Cornell University.

ners. The inner tub, a size smaller than the outer one, is supported by iron braces and perforated metal strapping at the bottom so that there is about an inch-and-a-half space around the sides and bottom for hot water. In the center of the inner tub is an opening leading to the gate on the outside, and a tap for drawing off the water completes the outfit.

This Association has warning cards for its members to post at outapiaries to the effect that a $100 reward is offered by the Association for information leading to the arrest and conviction of thieves stealing the bees. The constitution is to be changed so that in the future the reward shall cover only apiaries located within the ten counties in Western New York which the Association covers.

The former officers were reelected including Dr. Robert Volgenau, President, and George E. Norris, Secretary.



H. C. Harvey of Williamsfield, and his honey heater.

New Uses for Wax and Propolis

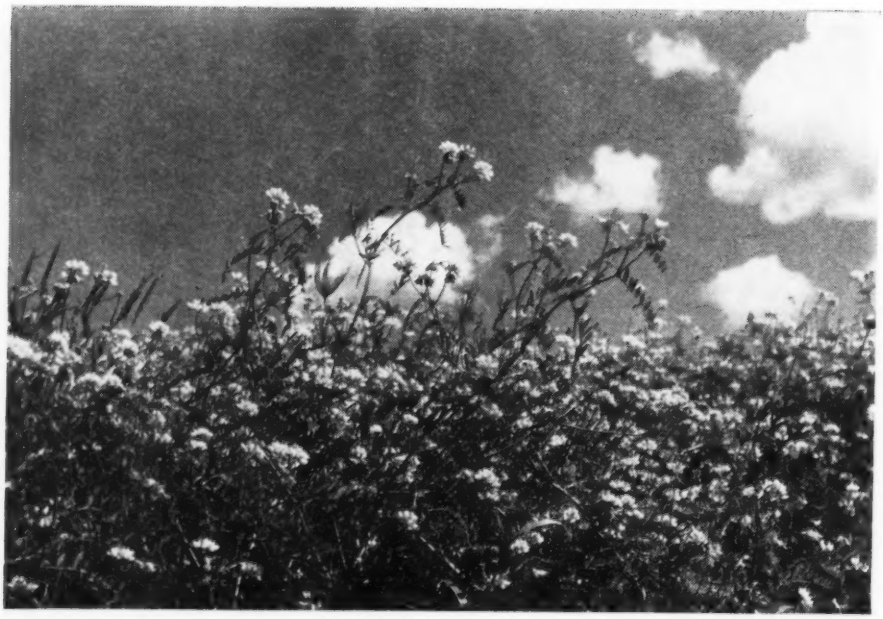
By J. W. Spencer, Birmingham, Florida

Here are two odd uses for products of the apiary which may be interesting to someone:

(a) If you have an automobile which has a cowl ventilator with a rubber gasket which tends to come loose when the ventilator is opened, it can be cured by placing some propolis under the gasket and setting the car in the sun until the propolis is melted.

(b) If you have a fountain pen, the cap of which comes unscrewed in your pocket, rub a little beeswax on the threads and you will have no more trouble.

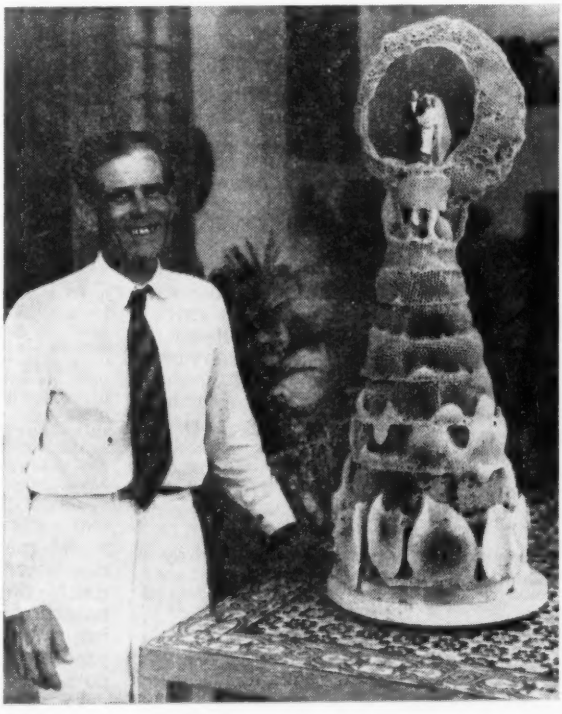
XUM



A nice stand of crown vetch.—Photo by Ed Britten, Experimental Farm, Brandon, Man.

Woodland apiary belonging to Chas Markley of Parrysville, Pa. — Photo by Paul Hadley, Philadelphia, Pa.

This well-cared-for yard belongs to Wm. H. Keyser of Schenectady, New York



This cake was finished in 1947 by a Cuban beekeeper, Julio Ravelo Bofill, at the farm of Frank Steinhart, President of the Havana Electric Railway Company. Mr. Steinhart's daughter was going to be married on June 1st, and Julio Ravelo made this cake as a wedding present. It was made in 20 days by a special feeding, and it was colored by mixed honey.

XUM

Asked and Answered

Does the Sunlight Damage Brood?

Question: I should like very much to know if frames of brood may be injured by direct sunlight.—E. E. Rowland, Wash.

Answer: You should not permit the rays of the sun to shine directly on either combs containing brood or honey for any length of time, as the hot sun may melt the wax. The melting point of wax is approximately 143 degrees F. It does no harm to let the sun's rays shine into the bottom of the cells long enough to see the eggs and young larvae but combs should not stand in the rays of the sun for any length of time.

Keeping Surplus Queens

Question: I operate a small apiary and often I have surplus queens which have to be destroyed. About the time I destroy a queen (having no way to keep them on hand) I find I need one. How can I keep these queens on hand?—Leman W. Cooper, W. Va.

Answer: One way to keep a small surplus of laying queens on hand is to have nuclei in or at the side of your apiary. Each nucleus, which may be a regular hive with a couple of frames of brood, a comb of honey, some empty combs, and a laying queen, will then provide comb space for the queen to lay eggs. If such a nucleus is kept for a time, it may be necessary to add more comb space in order that the nucleus may expand. In any event, if and when a queen is needed, you then have a spare one on hand. To introduce a queen from a nucleus, simply lift two combs of brood with bees and the queen between the combs into the middle of the queenless hive, making sure, of course, that the hive into which the queen is introduced is queenless. Some beekeepers are using this method at present and find it quite satisfactory. If not all of the queens kept in the nuclei are needed, such nuclei may be permitted to build up into normal colonies which they will usually do before the end of the season. This is one way to make increase.

Retarding Granulation of Honey

Question: How can I prevent my honey from sugaring? Should I try to heat all of it before I bottle it? If so, how long should I hold it and at what temperature? Is there any chemical to prevent sugaring? —L. E. Murchison, Texas.

Answer: To retard granulation in honey in glass jars for the market, it should be heated to a temperature of 160 degrees F., holding it at that temperature for about one-half hour. After the honey has settled it should be run into jars while warm or almost hot. This treatment should keep it in liquid form until it is in the hands of the consumer. Most honeys will granulate eventually when left in containers for a time. Some honey labels contain a notation stating that if the honey crystallizes it may be reduced to liquid form by placing the container in warm water for a few hours. It would be possible to add something to the honey that would prevent granulation but the Pure Food authorities would not permit the addition of any chemical to honey.

Sterilizing Diseased Hives

Question: I have acquired some empty hive bodies which may have contained diseased bees four or five years ago. I have scoured and scrubbed them clean in a vat of boiling water. Will it be safe to use them?—M. Nelson, Ill.

Answer: It would seem that the hives you have cleaned by boiling in hot water would be safe for future use. The important thing is to remove every trace of honey and wax and this would be accomplished by boiling in water for a reasonable length of time. Authorities say that boiling hive parts in water for 20 minutes will make them safe for future use.

What to Do with Cross Bees

Question: I have four hives of bees, and until this summer they were all very gentle and could be handled any time without veil or gloves. Recently I put on some supers and ever since they are so ugly that they try to chase me from the back yard as soon as I get within 50 feet of the hives. They are annoying to the neighbors, too. Can you tell me the reason for this behavior, and will they quiet down again, or will I have to destroy them and get some fresh stock? — Corey Brooks, Mich.

Answer: Skunks scratching at the entrances of hives during the night may make bees cross to handle when worked by the owner the next day. Probably you know whether or not skunks are bothering your bees. It is possible that you have one or more colonies that come from a strain that is difficult

to handle and perhaps vicious in nature. It is a fact that at some seasons of the year some strains of bees are hard to handle and at other times easy to handle. If your cross bees insist on stinging you and your neighbors, you should replace the queens in those cross colonies with young queens of a known gentle stock. In order to remove the undesirable queens you can quiet the bees by putting a little carbolic acid in the smoker on top of the fuel after the smoker is lighted. The odor of the acid subdues cross bees quite readily. You doubtless know that it is advisable to manipulate hives during the middle of the day when bees are working well, carrying in nectar and pollen. Bees that are ordinarily gentle to handle are likely to resent being handled on a cool day when little if any nectar is coming in. We hope you can get your problem solved and that it will not be necessary to destroy the bees.

When to Put on a Queen Excluder

Question: I have one apparently healthy colony of Italians on which I have recently placed an empty hive containing 10 frames of foundation without a queen excluder. There seem to be two schools of thought as to whether this is the best procedure. Some say the queen will start brood upstairs, others say she will stay happy with the brood below and that the extra space will prevent swarming and that in any case I can add shallow supers and a queen excluder for my share of their honey. What is the best advice for a beginner. And what (if anything) should I do to winter them in the climate of Somerset County of Pennsylvania?—Geo. L. Sumner, Pa.

Answer: When adding an extracting super containing frames with full sheets of foundation it is advisable to omit putting on a queen excluder until the bees have started work in the super, drawing out the full sheets of foundation and storing nectar in the combs. Sometimes the queen may lay a few eggs in the center combs of the super. However, when the bees have started work in the super the queen excluder should be put on, making sure that the queen is down in the lower chamber. During a good honey flow when bees need comb space for the storage of incoming nectar, and after they have begun work in the first super, more supers may be added on top as needed. It is customary to place a queen excluder over the double brood chamber, placing supers intended for surplus honey above the queen excluder. The use of the double brood chamber, commonly called the food chamber hive, helps to insure populous colonies to go into winter quarters as well as an adequate amount of stores for winter and early spring use. It is not absolutely necessary in your area to use a food chamber or double-brood chamber hive but this type of hive helps to insure an abundance of stores throughout the season and usually makes feeding sugar sirup during the fall and spring months unnecessary.

Dividing Strong Colonies

Question: I have four eight-frame double brood chamber hives of bees. We have just received two full supers of white clover honey from each hive but our honey flow is over. These hives never swarmed. I would like to have a little increase. If not too late can I take the upper brood chamber and set it on a bottom board on a new stand and let them raise a queen of their own or should I give them a laying queen?—Tinsley Tansel, Ind.

Answer: As your two-story colonies are very populous in bees, it should be possible for you to divide the colonies by taking the upper brood chamber, sometimes called the food chamber, and setting it onto a new stand nearby. You should make sure that both divisions, especially the one on the new stand, have plenty of honey. Of course, some of the old bees will drift back to the parent stand, but the young bees in the hive will stay put. You can supply the queenless part with a young laying queen, which seems preferable. If you permit bees to rear a queen it will take them about 21 days. Some fairly good queens are reared by this so-called emergency impulse of developing queen cells. If you decide to divide, the sooner you do it the better. If there is likely to be a late summer and fall honey flow in your locality, the divisions are likely to build up quite well into normal colonies. If the weather should not be suitable for the divisions to build up normally, you could then re-unite the hives in the fall, placing the division with the young queen on top of the division with the old queen. In most instances the bees will retain the young queen and dispose of the old queen.

Just News

A Pollination Conference sponsored by the **Honey and Pollen Plants Committee** of the **American Beekeeping Federation** is to be held on the campus of the University of Arizona at Tucson October 24 to 26. The lack of bees for adequate pollination of farm crops at present, as well as the equitable payment by farmers to beekeepers for pollination service will be discussed by competent authorities on this subject. Experienced beekeepers, entomologists, seed growers, and farmers from over the country will participate. This is an opportunity for beekeepers and farmers to learn more about the value of bees for pollination and for those who need honey bees for pollination to know how bees may be obtained when needed. More details on this conference will appear in the October issue.

* * * * *

A joint meeting of the Westchester County Beekeepers' Association, the Bronx County Beekeepers' Association, and the North Jersey Beekeepers' Association will be held on Sunday, September 17, starting at 10:00 a.m. This is to be an all-day picnic meeting. Place: Flint Park, Larchmont, New York. Guest speakers will be on hand to address the group. There will also be games for those who wish to participate. Bring a picnic lunch and come early.—A. M. Barnes, Publicity.

* * * * *

The Third Annual Beekeepers' Short Course is being held at the University of Virginia in Charlottesville on September 6 and 7.

* * * * *

The next meeting of the **Morris County Branch of the New Jersey Beekeepers' Association** will be held at the Pitney Farm one mile east of Mendham Center on Route 24, Sunday afternoon, October 1, at 2 p.m. Extracting will be demonstrated and the wintering of extracted frames will be discussed.

* * * * *

The date for the **annual meeting of the Texas Beekeepers' Association** has been set for Monday and Tuesday, October 2 and 3, 1950, and is to be held at A & M College, College Station, Texas. State Entomologist Dr. F. L. Thomas and his wife have invited the beekeepers to an informal gathering at 7:30 on Sunday evening, October 1, in their home at 663 Walton Drive, located on the southeast corner of the College Hill, College Station, Texas.

Exact program details of the annual meeting are not yet available. We are to feature panel discussions by district associations within the state and to place emphasis on (1) bee poisoning; (2) pollination. Bill Porter of Terrell, Texas, will present the legume growers' problem to the assembly. The soil conservation service expects to have a representative speak on the program on a subject relating their work to beekeeping. Contacts have been made with authorities on the subjects of pollination and insecticides, but program details are yet to be worked out. Research on both these important topics is to be reported by workers at A & M regarding work being done there. American Beekeeping Federation representatives have been invited to attend to bring up-to-date information on the honey price support program.

A revision of the constitution is to be presented to the Association as prepared by Edward Burleson, John Milam, and Roy S. Weaver, Chairman.

Mrs. L. A. M. Barnette, President of the Women's Auxiliary, promises a lively meeting for the ladies and plans to present a color movie travelog of Mexico.

F. W. Hensel in the placement office of A & M College advises that hotel accommodations are available six miles from the College at Bryan, Texas, at the following places: La Salle Hotel, Charles Hotel, Bryan Courts, and Aggie Auto-Tel. At College Station, sleeping facilities are available at Blue Top Courts and State Motel.

The meeting is open to the public, and all persons interested in beekeeping are invited to attend.—L. A. M. Barnette, Sec.-Treas.

* * * * *

The Eastern Branch Tennessee State Beekeepers met in Annual session with the Blount County Beekeepers as host on August 4, 1950, at Wildwood Springs Park.

Basket lunch was served and various bee problems ably discussed. Officers for 1951 elected were: Jack Wilson, Maryville, President; Roy Brown, Del Rio, Vice-President; W. D. Reams, Morristown, Secretary & Treasurer. The 1951 meetings are to be held in Grainger County.—W. D. Reams, Sec. & Treas.

* * * * *

The Erie County (Ohio) Beekeepers' Association held its summer picnic at the Mitchell Honey Farm on State Route 101 west of Castalia, Ohio, on Sunday, July 30, at 4:30 p.m. A short business meeting was held, after which there were several contests, for which prizes were given. There were also demonstrations on handling and requeening of the hive. Guest speaker was Walter Thomas of The A. I. Root Company, Secretary of the State Beekeepers' Association. The September meeting will be held on Friday, September 1, at 8:00 p.m. in the Agricultural Extension office in the Court House at Sandusky, Ohio. Plans are being made for an exhibit at the Erie County Fall Festival.—Mrs. Al Roeser, Sec.

* * * * *

The Middlesex County (Massachusetts) Beekeepers' Association held its regular outdoor meeting on August 26 at the home and apiaries of one of their new members, A. K. Tinkham, at 11 Poplar Street, Belmont, Mass. A good turnout of members and friends enjoyed the inspection of hives and the Club Hive started in May was found to be making fine progress. The queen, a fine young vigorous dark Italian, was clipped and painted red for identification. This fine strong hive will be given to some lucky member at our September 30 meeting which will be held at the apiaries of Chester McInnis in Littleton, Massachusetts. For members and friends who would like tickets see Mr. McInnis, Chairman of the Club Hive. A letter was read from Claude R. Kellogg who was one of the founders of the Middlesex Club and who now resides in and keeps bees in Insurgentes, Mexico. He tells us that he is keeping up with our doings through the notices in the beekeeping magazines he gets from the States. — John H. Furben, Sec.-Treas.

The Minnesota and North Dakota meeting held at Detroit Lakes July 28 and 29 was a great success. Out-of-state speakers such as Dr. J. E. Eckert of California; Roscoe Franks of the Ohio Co-op.; Mrs. Harriett M. Grace, Director of the American Honey Institute at Madison, Wisconsin; H. A. Schaeffer of Wisconsin; Art Kehl of G. B. Lewis Company; Glenn O. Jones, Secretary of The National Federation of Beekeepers, Atlantic, Iowa; as well as some speakers within the states, Dr. J. A. Munro of Fargo; T. L. Aamodt of St. Paul; C. D. Floyd, G. C. Langley, Editor of the Minnesota Beekeeper; and Dr. M. H. Haydak of the University of Minnesota, helped to insure a successful meeting. A note of optimism prevailed throughout the sessions, which made us feel that the beekeeping industry is not retrograding but is taking on new life and is, in fact, a most important and essential branch of agriculture. Points brought out by various speakers will be presented editorially in future issues.

* * * * *

South Carolina and **North Carolina** summer meetings held August 16 to 18 in Clemson and Brevard were unusually interesting and well attended. The array of fine speakers on the programs, such as C. J. Hudson of Atlanta, Georgia; C. G. Ellison, the outstanding queen breeder of South Carolina; G. W. Vest of Lynchburg, Virginia; W. A. Stephen of Raleigh, North Carolina; and W. H. Purser of Clemson, South Carolina, helped to insure successful meetings. Mr. Hudson predicts a larger amount of clover honey produced in the South in the near future due to more clover and less cotton being grown. He further said that an interest in clover seed production will require more honey bees for pollination. A seed-growing project in Morgan County this season where bees were moved in, gave 150 pounds per acre and in another county a yield of 300 pounds per acre from crimson clover. was secured.

We all missed Ned Prevost of Clemson who is ill in the hospital.

* * * * *

The Indiana State Beekeepers' Association held a most successful meeting at Purdue University on

(Continued on page 580)

XUM

WISCONSIN MEETING

(Continued from page 563)

Good Containers Help Honey Sales

Roscoe W. Franks, Sales Manager, Ohio Honey Co-op., was with us and spoke on honey marketing. He said prices were strengthening and there is a better outlook for the honey market. He feels Co-ops can furnish leadership in the honey marketing field. Showing a new type of glass jar for honey, he emphasized that an ornamental type of container can help greatly in the sale of honey providing good honey is always placed in that container.

European Beekeeping Different

Walter T. Kelley of Paducah, Kentucky, gave a most interesting talk on the trip he and Mrs. Kelley took to Europe. He exhibited a number of tools and items of equipment used by European beekeepers. There was a veil with a hole in front through which a pipe stem is inserted; a pipe for blowing smoke so that both hands could be used for working. We wondered how much smoke could be produced in a smoker with a fuel chamber about the size of a teacup. Honey sells for as high as $1.00 per pound in Europe and beekeepers are ranked with professional men like doctors and lawyers and receive a diploma when they gain the rank of Master Beekeeper. Most laboring people in European countries ride bicycles but the large beekeepers have automobiles. Wages being low in Europe for laboring classes, we wondered how many people could eat honey at $1.00 per pound.

Pollination

Dr. J. E. Eckert, Prof. of Beekeeping at Davis, California, gave a most interesting talk, one which all our beekeepers should have heard. He said that much foreign honey, especially from Mexico, is being imported, and that it should not sell for less than our own. There is a movement on in California to pass legislation assessing honey for honey promotion, marketing, and research. It would also enable them to pay their full share of 10 percent of the budget of the Honey Institute and Federation. Pollination is an important beekeeping operation in California because there is a great deal of seed produced, especially alfalfa and Ladino clover. Large populations, as high as four colonies of bees per acre in legume fields, produce a large increase in seed production. For alfalfa, bees are moved in when the plants are in full bloom so the bees won't go to competing plants. Yields of Ladino seed as high as 600 pounds per acre have been secured when three colonies per acre were used. However, the bees were unable to produce enough nectar for winter use and had to be fed. Therefore, the seed producer must share with the beekeeper in the benefit of increased seed production. Intricate and detailed contracts are being made for this purpose. Many of the poisons used to control insects are fatal to bees, said Dr. Eckert, and if used on legumes, the bees must be taken out during that time.

Increase in Alfalfa Seed Production

He said that the Ranger alfalfa normally produces about 200 pounds of seed per acre on the average. One producer, by moving in two colonies per acre plus benefit from additional bees in the cotton fields nearby, received as high as 700 pounds of seed per acre. Contracts between the seed producer and the beekeeper are written on the basis of a certain amount such as $3.50 per colony as a base plus a certain percentage of the seed obtained in excess of normal seed production without bees.

Bees for Comb Honey Production

M. J. Deyell, Editor of Gleanings in Bee Culture, from Medina, Ohio, said the nation needs more comb honey. It sells well, there is a shortage, and it can be produced at a profit. He outlined a method of production by using two brood chambers—so necessary at the beginning of the season to produce a large strong colony which is the only kind that will produce good comb honey. He also stated bees greatly increase the yield of clover seed. In an Ohio experiment a field to which bees were brought yielded twice as much seed as did a field without bees. The A. I. Root Company had arranged to furnish growers with 500 colonies of bees for legume pollination and he feels we are entering a new era in beekeeping—the use of bees for pollination in addition to honey production. In Ohio, he said, there is only one colony for each 85 acres of land while Wisconsin has only one colony for each 145 acres.

We're Shooting for Prosperity

—from the American Beekeeping Federation Office

Now is the time for the beekeeping industry to prepare to stand on its own feet.

It can be done and we want it to be done within the next two years.

We have price support for honey. Unsatisfactory as it may be from the producer standpoint, it offers a stability we have not had previously.

At 9 cents there will not be unwarranted expansion of honey production. More attention will be given to **pollination and a fair and equitable return for service rendered.** We have talked for many years about giving agriculture many times more value in pollination than our own returns from honey and wax.

Largely as a result of the Honey and Pollen Plants Committee, agriculture is now ready and willing to pay for pollination. As its efficiency is increased, the more willingly will they pay. It means the use of bees in heavy concentrations and little or no surplus honey from colonies so used.

The 9-cent figure will prevent distress sales of large lots of fine honey at 4, 5, or 6 cents as has happened in previous years; when such happens it depresses honey prices in ALL markets.

This 9 cents is a FLOOR price. It applies to honeys of all colors and flavors in all parts of the country so long as they meet the requirements of U.S. Grade B, as defined by USDA in 1943. It even goes beyond this grade and supports honeys with up to 20 percent moisture content at a figure slightly lower than 9 cents.

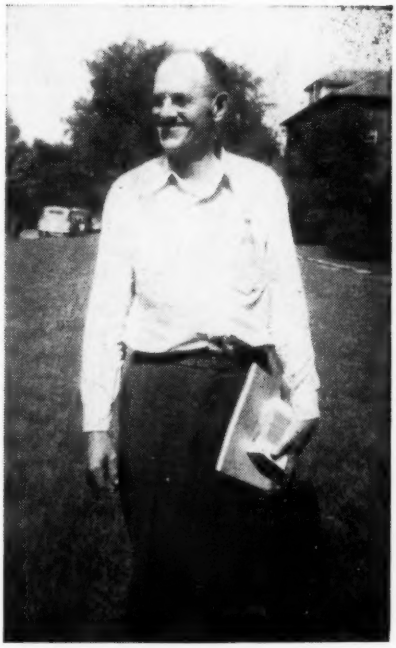
As the program is set up, honeys of lower grades and less acceptable flavors will move first. Those honeys of table grade can and should be held for the table market at a price substantially above the support level.

We want this program to operate smoothly and effectively. We are asking, and will continue to ask for amendments that will improve it. Beyond that we do not anticipate asking further support measures so long as world conditions remain in a critical state.

We are concerned with the imminence of war and the controls that come with the preparation for war. We are setting up an industry advisory committee to insure that the industry has its fair share of such items as steel, tin-plate,

(Continued on page 582)

Roy Grout, President



Glenn O. Jones, Secretary

XUM

Buy and Sell Here

Only responsible advertisers and honest advertisements will be admitted to these columns. References required from new advertisers not known to us. Rate: 15c per counted word, each insertion. Each initial, each word in names and addresses, the shortest word such as "a" and the longest word possible for the advertiser to use, as well as any number (regardless of how many figures in it), count as one word. Copy should be in by the 10th of the month preceding publication.

HONEY FOR SALE

WE BUY AND SELL all varieties of honey. Any quantity. Write us for best prices obtainable. The Hubbard Apiaries, Manufacturers of Beekeepers' Supplies, Onsted, Michigan.

NEW CROP of honey shipped daily from producer in Florida. Pure orange blossom, 5 lbs., $2.25; Pure Florida cut comb honey, 5-gal. pail, $2.75. No C.O.D. orders. All shipments prepaid. E. R. Raley, Daytona Beach, Box 1610, Florida.

HONEY, white to water white clover, heated and strained, ready for bottling. 15c per lb. in 60-lb. cans, fob. Lose Brothers, 206 E. Jefferson St., Louisville, Ky.

CLOVER extracted honey in sixties. Abram Brubaker, Lancaster, Pa., Rt. 1.

Orange blossom, Florida tupelo, white clover, and buckwheat honey in one or five gallon cans. Pure maple syrup in gallon cans. Alexander Company, 819 Reynolds Rd., Toledo, O.

NEW CROP clover honey in 60-lb. cans. Can or ton lots. E. L. Gamble, Adams, Rt. 1, N. Y. Phone 52577, Henderson, N. Y.

200 CASES No. 1 tulip poplar comb honey, $7.20 single case. Free delivery by truck up to 150 miles on large lots. W. C. Long, 1325 Andre St., Baltimore, Md.

HARRIS — Michigan extracted clover. New cans. Large or small orders. Harris & Son, St. Louis, Michigan.

HONEY AND WAX WANTED

BEEKEEPERS TAKE NOTICE—We can not guarantee honey buyers' financial responsibility, and advise all beekeepers to sell for cash only or on COD terms except where the buyer has thoroughly established his credit with the seller.

WANTED—Honey and wax, any quantity. Send samples and prices. Alexander Company, 819 Reynolds Road, Toledo 7, Ohio.

CASH FOR YOUR HONEY — Light extracted or comb. Regular trade send sample. 60-lb. cans furnished if desired. W. R. Moomaw, Stone Creek, Ohio.

HONEY WANTED—All grades and varieties. Highest cash prices paid. Mail samples. State quantity. HAMILTON & COMPANY, 1360 Produce St., Los Angeles 21, Calif.

WANTED — White and amber honey. Any amount. D. F. Treap, 316 Keenan Ave., Cuyahoga Falls, Ohio.

WANTED—EXTRACTED HONEY—Clover or light amber. C. H. Denny, Rt. 4, Ravenna, Ohio.

HONEY AND WAX WANTED — Mail sample. Advise quantity. BRYANT & SAWYER, 2425 Hunter St., Los Angeles 21, Calif.

CASH for your comb honey and all types extracted. Send sample and best price. Buckeye Honey Co., 3930 N. High St., Columbus 2, Ohio.

WANTED—Comb honey and extracted honey, large or small amounts. Send price list and samples. R. A. Raley, Box 2263, Daytona Beach, Fla.

WANTED—Extracted honey, all grades, also comb honey. 1500 60's emptys, used, for sale, 15c each. Honeymoon Products Co., 39 E. Henry St., River Rouge 18, Mich.

COMB HONEY WANTED—Section and cut-comb. Advise grade, quantity, and how packed. F. H. Hauck, P. O. Box 84, Kew Gardens, N. Y. Bank reference furnished on request.

WANTED: Fancy Comb honey. E. J. Cope, Attleboro, Mass.

WANTED honey of all grades. Submit samples. Highest prices paid. Schultz Honey Farms, Ripon, Wisconsin.

CASH FOR BEESWAX. Write as to quantity and we will quote price. Muench-Kreuzer Candle Co., Inc., Syracuse, N. Y.

BEFORE YOU SELL your clover honey contact us. Send samples and tell us how much you have. The Delaware White Clover Apiaries, 139 West William St., Delaware, Ohio.

FOR SALE

QUEENBEE PAINTING OUTFIT, $1.00; colony records, 10-15c postpaid. Southwick Apiaries, Waban, Mass.

WE CARRY a full line of ROOT QUALITY Bee Supplies. Prairie View Honey Co., 12303 12th St., Detroit 6, Mich.

FOR SALE — Write for large free Bee Supply Catalog. We manufacture bee hives, foundation, tanks, and extractors. Listing many items not found in other catalogs. Walter T. Kelley Co., Paducah, Ky.

WRITE FOR CATALOG — Quality Bee Supplies at factory prices. Prompt shipment. Satisfaction guaranteed. The Hubbard Apiaries, Manufacturers of Beekeepers' Supplies, Onsted, Mich.

The only comb foundation plant in the East. We sell foundation, work your wax, render combs and cappings. Robinson's Wax Works, R.D. 3, Auburn, N. Y.

SIMPLEX TRAP clips queens without handling, $1.00 postpaid. Instant Frame Spacers — eight-nine, specify size, $1.50 postpaid. Free circulars. George Leys, 36 Jackson St., New Rochelle, N. Y.

YOUR WAX WORKED into medium brood foundation, 23c pound; 100 pounds, $19.00. Medium brood foundation for sale at 65c pound. Fred Peterson, Alden, Iowa.

CLEAN UP AFB WITH SULFA. 25 tablets, 50c; 50, $1.00; 100, $1.50; 1000, $7.00. Write for big 64-page catalog listing many items not found in other catalogs. WALTER T. KELLEY CO., Paducah, Ky.

SMALL APIARY, $50. Dr. McKee, Alpine, N. Y.

BEES, equipment, extractor, boiler, and truck. N. George Thompson, Sylvania, Ohio.

FOR SALE—Well established package bee and queen business. Ala, care of Gleanings, Medina, Ohio.

BEES AND QUEENS FOR SALE

We use all possible care in accepting advertisements but we cannot be held responsible in case disease occurs among bees sold or if dissatisfaction occurs. We suggest that prospective buyers ask for certificate of inspection as a matter of precaution.

GOOD ITALIAN QUEENS, 60c each. D. W. HOWELL, Shellman, Georgia.

CAUCASIANS—Booking orders for 19-51. Lewis & Tillery Bee Co., Route 1, Box 280, Greenville, Ala.

NORTHERN BRED ITALIAN QUEENS —For production, $1.00 each. Ten-up, 90c. Shirl Baker, Rodney, Michigan.

YANCEY HUSTLER QUEENS — 3-Band Italians. Bred for honey production. 75c each; $8.00 per dozen. Caney Valley Apiaries, 2500 Nichols, Bay City, Texas.

PACKAGE BEES headed by mountain Gray Caucasians or leather colored Italian queens. Write for prices. Twin Bee Co-op., 3616 Caucasian Circle, Tampa 9, Florida.

BREWER'S LINE BRED Caucasian queens, 1-99, $1.00; 100 and up, 75c. Member ABBA. Brewer Brothers Apiaries, 3616 Caucasian Circle, Tampa 9, Florida.

CENTRAL FLORIDA Orange honey locations, honey house 22 x 36 ft.; Duplex 26 x 48 ft. One apartment furnished. Ideal set-up for owner with hired family or as part-time rental. No bees or equipment. $8500.00 complete. Pictures on request. Melvin Myers, Fruitland Park, Florida.

FOR SALE—350 colonies bees with full equipment and good locations. For particulars write John Holzberlein, Grand Valley, Colo.

GOLDEN QUEENS. 90c airmail. O. E. Brown, Rt. 1, Asheboro, N. C.

CAUCASIAN QUEENS. Very gentle and good workers. Select untested, 1 to 25, $1.00 each; 25 up 80c each. Black River Apiaries, Currie, N. C.

HONEY WANTED
Carloads and less than carloads. Mail sample and best prices in all grades.
C. W. AEPPLER COMPANY
Oconomowoc, Wisconsin

Michigan Headquarters for
Root QUALITY
Bee Supplies
Complete Line of Bee Supplies and Honey Containers
Prompt Service
Michigan Bee and Farm Supply
510 N. Cedar St.
Box 7 Lansing, Michigan

Hybrid — Regular — Queens
50c each
Airmailed — Clipped
Sunkist Bee Company
Convent, La.

HONEY LABELS
Improved designs, embodying color, balance, simplicity, and distinction. Please send for free samples & prices.
C. W. AEPPLER COMPANY
Oconomowoc, Wisconsin

Queens Our Specialty
Italian, Caucasian, and Carniolans
Three Isolated Mating Yards to Prevent Mixing Breeds
Italian queens, 1-10, $0.90
11-49, $0.85 50-up, $0.80
After May 15th, $0.50 each
Carniolan, the most gentle and good producers, $1.20 each
Caucasian, very gentle and produce beautiful comb honey, $.90
All queens shipped by Air Mail and guaranteed to please
Walter D. Leverette Apiaries
Box 364 Fort Pierce, Florida

Little & Moore Apiaries
Originally
LITTLE'S APIARIES
The John M. Davis Strain
GUARANTEED TO PLEASE
or money refunded
April 1st to June 1st:
1 to 10, $1.20 each
10 to 100, $1.10 each
June 1st to Nov. 15th:
1 to 10, $1.00 each
10-100, 90c each
Little & Moore Apiaries
Shelbyville, Tenn.

Package Bees Italian Queens For 1950

Packages with Queens:

	2 lbs.	3 lbs.	4 lbs.	5 lbs.
1-99	$3.00	$3.90	$4.70	$5.30
100-up	2.75	3.75	4.40	5.00

Queens 90c each Airmail postpaid —clipped on request.
No better quality at any price
Satisfaction guaranteed
Geo. A. Hummer & Sons
Prairie Point, Miss.
Established 1892

Italian Queens
Bred for business; gentle. 53 years breeding experience. Safe arrival.
Unt., $1.00; Sel. Unt., $1.25.
I. F. Miller, Warren, Pa., R. 3

GOLDEN ITALIAN QUEENS, very yellow and real gentle. 1 to 25, $1.00 each; 25 up, 80c. Carolina Bee Farm, Graham, N. C.

THREE BANDED Italian Queens, best of quality. Select untested, 1 to 25, $1.00 each; 25 up, 80c each. Satisfaction guaranteed. Alamance Bee Company, Graham, N. C.

FOR SALE—100 colonies 4 high, disease resistant hybrid queens, loaded with this year's honey crop. Standard equipment for another 100. Reasonable price. Write Roe Brothers, 103 W. Mifflin St., Madison Wis., or call 3-2125.

OPPORTUNITY—1800 colonies for sale. Howard Foster, Bridger, Montana.

MISCELLANEOUS

BEES FOR SALE OR LEASE—Will sell part or complete units fit your requirements. You can purchase part unit lease additional quantities round out your needs. Option to buy later. Proven territory: Idaho, Wyoming, Montana, Nebraska—sweet clover, alfalfa areas. Our processing plant and marketing program assures outlet honey produced from bees purchased or leased. Bright future—low cost operations—Our 45 years production experience ready assist you getting started. Right prices, reasonable terms available. BRADSHAW & SONS, Wendell, Idaho, Largest Individual Producer-Packer in U.S.

HELP WANTED

HONEY SALESMAN WANTED — Good income possible — protected territory — Write Box No. 650, care of Gleanings, Medina, Ohio.

WANT PARTNER, or will sell 200 clean heavy colonies at a bargain, crop on. 1009 Clay, Redlands, Calif.

SUPPLIES

ATTENTION BEEKEEPERS IN MINNESOTA and adjacent states. We offer a real service on Lewis-Dadant Supplies, honey containers, and labels at a price saving to you. Top market prices paid for extracted honey and beeswax. HONEY SALES COMPANY, 1806-08 NO. WASHINGTON AVE., MINNEAPOLIS, MINN.

SEEDS

SEEDS OF HONEY PLANTS. Ask for free catalogue. Pellett Gardens, Atlantic, Iowa.

EXTRACTORS FOR SALE

3-FRAME Root extractor, like new, $20.00. H. Braun, 3501 Touhy Ave., Chicago, Ill.

20-FRAME Root extractor, good condition, $75.00. C. F. Strahan, 207 N. 2nd Street, Missouri Valley, Iowa.

MAGAZINES

WESTERN CANADA BEEKEEPER—Official organ of the Manitoba Beekeepers' Association. One year, $1.50; two years, $2.25; three years, $3.00. In combination with Gleanings in Bee Culture, $2.75. 211 Affleck Bldg., Winnipeg, Canada.

KNOW interesting facts concerning the bees of India through the INDIAN BEE JOURNAL, published in English by the Bhupen Apiaries (Himalayas), Ramgarrh, Dist Naini Tal, U.P., India, or obtainable from them. Subs. Rs7/ or 10 shillings or 2.25 dollars per annum. Single copy Rs¼ s. 1/9 or 40 cents (International Money Order). Payment in mint postage stamps of your country accepted.

THE BEE WORLD—The leading journal of Great Britain and the only international bee review in existence. Specializes in the world's news in both science and practice of apiculture. Specimen copy post free. 12 cents stamps. Membership in the Club including subscription to the paper 10/6. The Apis Club, L. Illingsworth, The Way's End, Foxton, Royston, Herts, England.

Read the South African Bee Journal. Published every two months. Subscription 7/6 per year to the Treasurer, P. O. Box 3306, Cape Town, South Africa.

INTERESTED in Angora Goats? Read the Sheep and Goat Raiser, Hotel Cactus, San Angelo, Texas, the only ranch magazine published serving the Angora Goat industry. Subscription—$1.00. Sample copy—fifteen cents.

HONEY BEE POLLINATION

(Continued from page 543)

legume seeds and, through them, to a balanced and prosperous agriculture.

In all of it, the Federation has furnished the focal point through which was integrated the efforts of many and the end result has been most gratifying.

Forage Seed Conferences at Cedar Rapids and Atlantic, Iowa, on June 2 and 3, were but two of a great many such meetings held in various parts of the country in recent months. These were sponsored by the respective Chambers of Commerce, and programs covering all phases of forage seed production were arranged with the cooperation of Iowa State College and several farm organizations and farm agencies.

Pollination is a new field to most beekeepers and is requiring a radical change in thinking, in planning, and in operation. Not all will enter the field, but those who do so with the same careful attention to detail and the same careful operation as is required to produce a crop of honey will find the return from this service to be fully as satisfactory as that from honey production.

JENSEN Says —

Look to Your Queens

A good queen in every colony this fall will assure better wintering, and faster build-up next spring. It is crop insurance of first magnitude. With price support for honey now an actuality, the bottom has now been reached and we should all be able to look ahead more optimistically. Beekeeping is definitely again on the upswing.

"Magnolia State" 3-Banded Italians. Our Old Reliable Stock. 1-24, 90c 25-50, 80c; 51 and up, 75c each.

— — — — —

Jensen Reared Dadant Starline D.R. Hybrids. Full 3-Way Genuine Hybrids, not just daughters of hybrid mothers mated to any old kind of drones. Instrumentally inseminated and tested queens only are used for breeding purposes of both queens and drones; this is IMPORTANT.

Starline Hybrids, Disease Resistant, Isolation Bred Italians. 1-24, $1.15; 25-50, $1.05; 51 and up, $1.00 each.

Clipped and Marked Free
Air Mailed if expedient

Jensen's Apiaries
Macon, Miss.

WANTED:
1,000,000 Pounds of Honey!

Cooperating with the Government plan, write us for our profit-sharing plan. All grades accepted. We can call for your honey in truck lots. We will pack honey for you at nominal charge. Wax wanted for cash or to work into Eby's non-sag foundation. Modern wax and honey packing plant. Write or phone.

Hyland Apiaries
West Elkton, Ohio

HARDY NORTHERN QUEENS
Tested Queens, $1.00

Our season ends late OCT. Thanks to our many customers. Hoping you have been pleased with my queens. See you next year.

BREEDER QUEENS, $5.00

R. L. Livermore Apiaries
Collins, Ohio

Protect Your Future. Buy Your Extra Savings Bonds Now.

XUM

JUST NEWS

(Continued from page 573)

August 3. This was part of the Summer Agricultural Conference.

The able President of the Association, Walter R. Bielfield, was in the chair. The hard work which both the President, and Secretary-Treasurer, Gilbert Perigo, put into the Association is indicated by the success of the Association and the splendid paper it puts out periodically.

The program included an outdoor session at the university apiary, where Gilbert Perigo, Chief Inspector of Apiaries, spoke on disease problems in a most forthright manner.

Demonstrations of handling bees were made by the deputy inspectors.

The afternoon session was held in the Agricultural Building at the College, and the program included a most helpful and interesting talk by Dr. W. E. Roberts of the U. S. Apicultural Laboratory at Madison, Wisconsin. He spoke on the subject of "The Relation of Improved Stock to Better Management".

Dr. Elwood Montgomery of Purdue University spoke on beekeeping in New Zealand and showed some very fine colored slides of beekeeping in that country. Dr. Montgomery recently made a trip to New Zealand to study bumblebees.

Dr. J. E. Eckert of the University of California at Davis, California, spoke on beekeeping in the western part of the United States. Dr. Eckert is on a lengthy trip through the country.

The above three speakers made the afternoon program worthwhile.

* * * * *

The Extension Service of the University of Massachusetts, Amherst, Massachusetts, has just issued Leaflet No. 148 on beekeeping. A very comprehensive bulletin, full of information from cover to cover, it contains among other features, an interesting calendar for Massachusetts beekeepers showing by diagram what to do from April to November. Diagrammatic explanations of the Demaree plan for swarm control and other manipulations are presented which help the beginner, especially, to understand every detail.

One of Dr. Farrar's tables is quoted, showing that a 3½-lb. colony wintered over, sent one-third more bees to the field each minute than did a 5-lb. package of bees.

Massachusetts has long had a program of cooperation between orchardists and beekeepers. We quote:

"Since many orchardists do not have the time or inclination to care for the bees which are necessary for pollination purposes, a cooperative plan between the orchardists and a neighboring beekeeper will produce the best results. In this plan the orchardist buys the bees from the South and gives them to the beekeeper, who furnishes the necessary equipment, prepares the bees for work in the orchard, and then takes them home at the end of the blooming period.

"Renting Bees to the Orchardist

"No one should plan to rent his bees to an orchardist unless he is conversant with the hazards he runs and the amount of work involved. Bees moved into unknown territory are often exposed to foulbrood and should they contract it not only would they be a total loss, but, when brought back to the home apiary they might easily be the means of infecting many of the other colonies also. If annoyed, bees will sometimes kill or ball their queen and this sometimes happens to colonies being moved; long-distance hauling often causes the death of brood, perhaps due to neglect; and strong colonies, unless carefully prepared, may suffocate on the road. With all the risks to be run and, in addition, the fact that in most cases the home apiary is so situated that the bees will be able to secure as much nectar from dandelion and early flowers as they can use, it is no wonder that many beekeepers do not feel it worth while to rent their colonies. On the other hand, men of experience who have a definite system of moving and who properly prepare their bees, are able to rent their colonies year after year at a good profit. After all, a rental of $5 on a colony worth from $15 to $30 is worth some risk."

In the summer of 1949 Dr. Shaw made an extensive trip over United States.

Bulletin 148, while intended for Massachusetts beekeepers, shows an intimate knowledge of beekeeping under widely varying conditions.

HONEY, BEES, AND HONEYCOMB

(Continued from page 533)

A summary of all Biblical references follows:

1. **Honey**
   - Genesis—43:11
   - Exodus—3:8, 17; 13:5; 16:31; 33:3
   - Leviticus—2:11; 20:24
   - Numbers—13:27; 14:8; 16:13, 14
   - Deuteronomy—6:3; 8:8; 11:9, 26:9, 15; 27:3; 31:20; 32:13
   - Joshua—5:6
   - Judges—14:8; 14:9; 14:18
   - I Samuel—14:25; 14:26; 14:29; 14:43
   - II Samuel—17:29
   - I Kings—14:3
   - II Kings—18:32
   - II Chronicles—31:5
   - Job—20:17
   - Psalms—19:10; 81:16; 119:103
   - Proverbs—24:13, 14; 25:16; 25:27
   - Song of Songs—4:11; 5:1
   - Isaiah—7:15; 7:22
   - Jeremiah—11:5; 32:22; 41:8
   - Ezekial—3:3; 16:13; 16:19; 20: 6, 15; 27:17
2. **Bee**
   - Deuteronomy—1:44
   - Judges—14:8
   - Psalms—118:12
   - Isaiah—7:18
3. **Honeycomb**
   - Proverbs—5:3; 24:13; 27:7
   - Song of Songs—4:11; 5:1
   - I Samuel—14:27
   - Psalms—19:10
   - Proverbs—16:24

Bibliography:

Biblical Concordance

Anatol Safanov—The Universal Jewish Encyclopedia, p. 450

Dr. David I. Macht—Bees and B's—Biblical and Profane; The Synagogue Light, September. 1947

OLDEST BEE JOURNAL IN THE ENGLISH LANGUAGE

Keep up on markets, practices, scientific data, regulations, and plant possibilities.

1 year, $2.00, U. S. and Canada

Foreign postage, 50c a year extra

AMERICAN BEE JOURNAL

Hamilton, Illinois

CAUCASIANS

CARNIOLANS

Hardy, prolific, rapid build-up, best of workers. Caucasians have the longest tongue of any race. Both races build beautiful white combs. BOTH ARE THE GENTLEST OF ALL RACES OF BEES. Gentleness is safest in towns, near neighbors, or near streets or highways. Gentleness saves time, sweat, patience, and work. Discount on quantity orders. Ask. More and more beekeepers requeen during September.

Prices, Both Races:

Untested Queens .....$1.00 each

Tested Queens ..... 1.75 each

By Air Mail

Albert G. Hann

Glen Gardner, New Jersey

Northern Bred Leather Colored Italian Queens

50c Each

Air Mail if distance justifies

Better equipped to give good service

Diemer Bee Co.

Rt. 2 Box 7 Liberty, Mo.

IT'S NEW, GOOD, YOU'LL HAVE IT

The C. W. Evans Bee-Rite Method

Brood super always on top, nature's way (Pat. Pend.). No lifting or disturbance of honey supers to inspect brood. Just raise the full ventilation cover with regulated top bee entrances (patented). No disturbance of brood super to work honey supers. Closed hive has all parts locked in position. Uses standard supers. No winter packing, no queen excluders. Read all about it, free or come and see it working. Evans Bee-Rite. Portville-Olean Highway 17, Route 2, Olean, New York

Three Banded Italian Queens

of a select quality.

Selected for production — gentleness in handling. Personally reared large queens, 75c each.

Fred C. Brock

McDonald, Tennessee

High Quality

Q U E E N S

75c each by Airmail

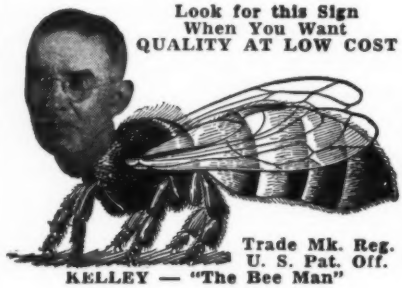
Carlus T. Harper

New Brockton, Ala.

Bring Your Dreams Down to Earth
Buy Bonds

XUM

Look for this Sign
When You Want
QUALITY AT LOW COST



Trade Mk. Reg.
U. S. Pat. Off.
KELLEY — "The Bee Man"

QUEENS

Improved Hybrid Cross

These bees appear to be light, 3-banded Italians and are gentle and easy to handle and stay on the combs. However, they are of greatly improved quality and lay frame after frame of solid brood.

Young Improved Laying Queens by Prepaid Air Mail **75c Each**

Lots of 25 and up, 65c Each

Walter T. Kelley Co., Box 210, Paducah, Ky.

Fall Requeening with Hollopeter's Queens Pays

Stephen A. Lovejoy, Jr., Sec.-Treas. Essex Co. Beekeepers' Assoc., writes:
"I got one of your queens last year (1949) in October, which is the latest I have ever introduced a queen, and that is one of my best colonies."

Calvin Hornsberger, Eagleville, Pa., says:
"Your queens are producing top honey gathering colonies in a 30-colony apiary."

Howard M. Myers of Myers & Davis, Ransomville, N. Y., carlot producers of fruit and honey and who have used thousands of Hollopeter queens, say as of August this year:
"We have been using your queens for many years and have always been pleased in every way with them and your service."

You can have the same hardy honey-gathering Italians, same prompt service and satisfaction guaranteed. Young mated and laying queens until Nov. 10, $1.00 each; 5-9, 90c each; 10-24, 80c each; 25-99, 75c each; 100 or more, 70c each.

White Pine Bee Farms **Rockton, Pa.**
(Gleanings Advertisers from 1911)

BETTER BRED QUEENS **THREE BANDED ITALIANS**
Watch those failing queens and poor colonies. Be sure and replace them with our Better Bred Stock and watch them pay off.
QUEENS — — 50c Each
Calvert Apiaries **Calvert, Alabama**

WE'RE SHOOTING FOR PROSPERITY

(Continued from page 575)

screen wire, lumber, trucks, tires, and gasoline.

We believe the industry should adopt a voluntary price ceiling for honey. This will prevent repetition of past unfavorable experiences. We suggest a voluntary ceiling of 100 percent of parity at wholesale. We urge that retail prices do not rise above levels that reflect such a return to the producer.

Our Marketing Committee is just now getting into gear. It will center attention on new and improved merchandising methods. These have not so far had serious attention on a national scale. If this Committee has from the industry the same support and encouragement that has been given to the Honey and Pollen Plants Committee it can be just as effective.

Let's give our best efforts to better returns from pollination service—justified by a better service rendered—and to methods of merchandising that will increase producer returns from honey.

We want to stand on our own feet. It can be done and we want it done in the next two years.

Signed: Roy A. Grout, Pres.
Glenn O. Jones, Sec.

Queens

York's Quality Bred Italians
$1.00 Each
The strain preferred by leading honey producers.

York Bee Company

Jesup, Georgia
(The Universal Apiaries)

KOEHNEN'S

Package Bees and Queens
For Quality and Service
KOEHNEN'S APIARIES
GLENN, CALIFORNIA

Healthy Italian Bees & Queens
Write for 1950 Prices
Georgia Bee & Honey Apiaries
P. O. Box 312 Hortense, Ga.

Requeen with Three Way HYBRID Queens

These breeder queens are a cross of two lines developed by the Government in their breeding project and their virgins are mated to drones of our strain of bees.

We are pleased to offer you these queens and feel you cannot go wrong in requeening your honey producing colonies with them. We will keep our strain of Italian bees to supply those who do not care for the Hybrids.

When ordering Hybrids allow as much time as possible so your order can be filled without delay.

Prices

HYBRIDS Cross No. 1	Our Strain
1-10, ...$1.25 ea.	1-25, ...75c
11-25, ...1.15 ea.	26-up, ..65c
26-up, ...1.00 ea.	

"Satisfaction Guaranteed"

Rossman & Long
P. O. Box 133 Moultrie, Ga.

QUEENS **Garon's High Producing Stock to Overcome Low Honey Prices** **QUEENS**

PRICES

On Our 3-Banded Italian Quality Queens		On Garon Reared Dadant Starline Hybrid Disease Resistant Queens	
1-24	60c	1-24	$1.10
25-99	55	25-99	1.00
100-499	50	100-499	.95

Queens Mailed Prepaid, Regular or Air Mail, Painted and (or) Clipped at No Extra Charges.

Garon Bee Company **Donaldsonville, La.**

BESSONET'S ITALIAN QUEENS

Fall requeening with good stock reduces winter losses and assures better honey crops the following year. Try our queens now and you will use them in the future.

Prices: 1-24 ..... 80c each; 25-up ..... 75c each, airmailed and clipped without charge.

Bessonet Bee Company **Donaldsonville, La.**

Bring Your Dreams Down to Earth
Buy U. S. Savings Bonds

XUM